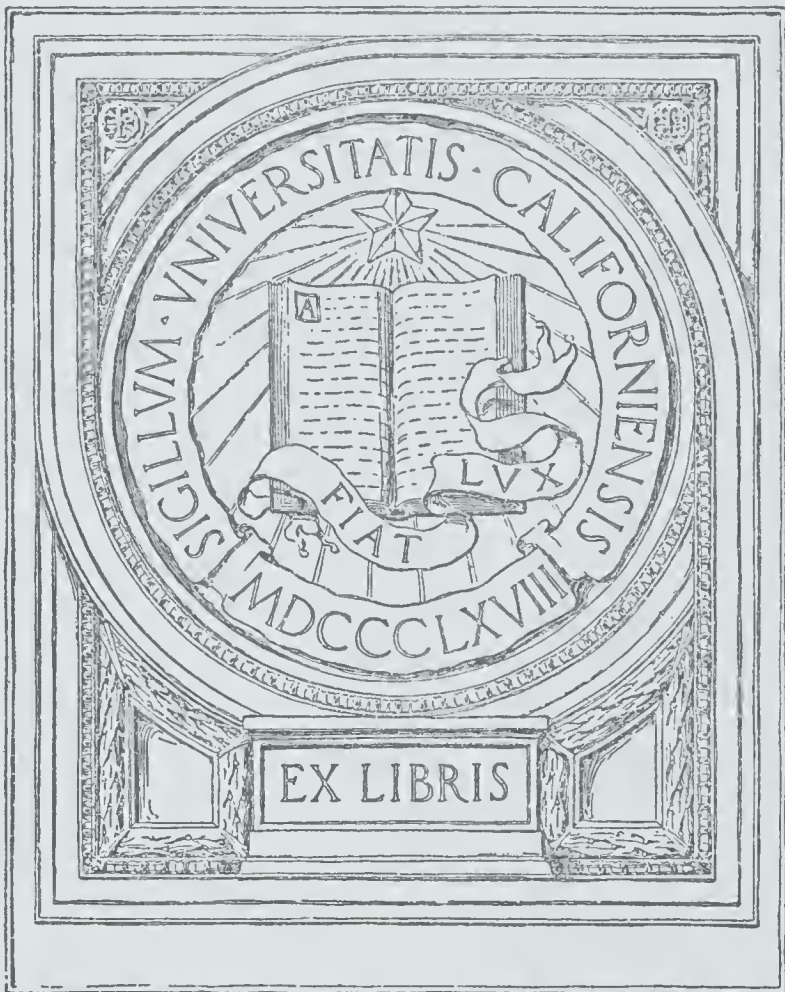
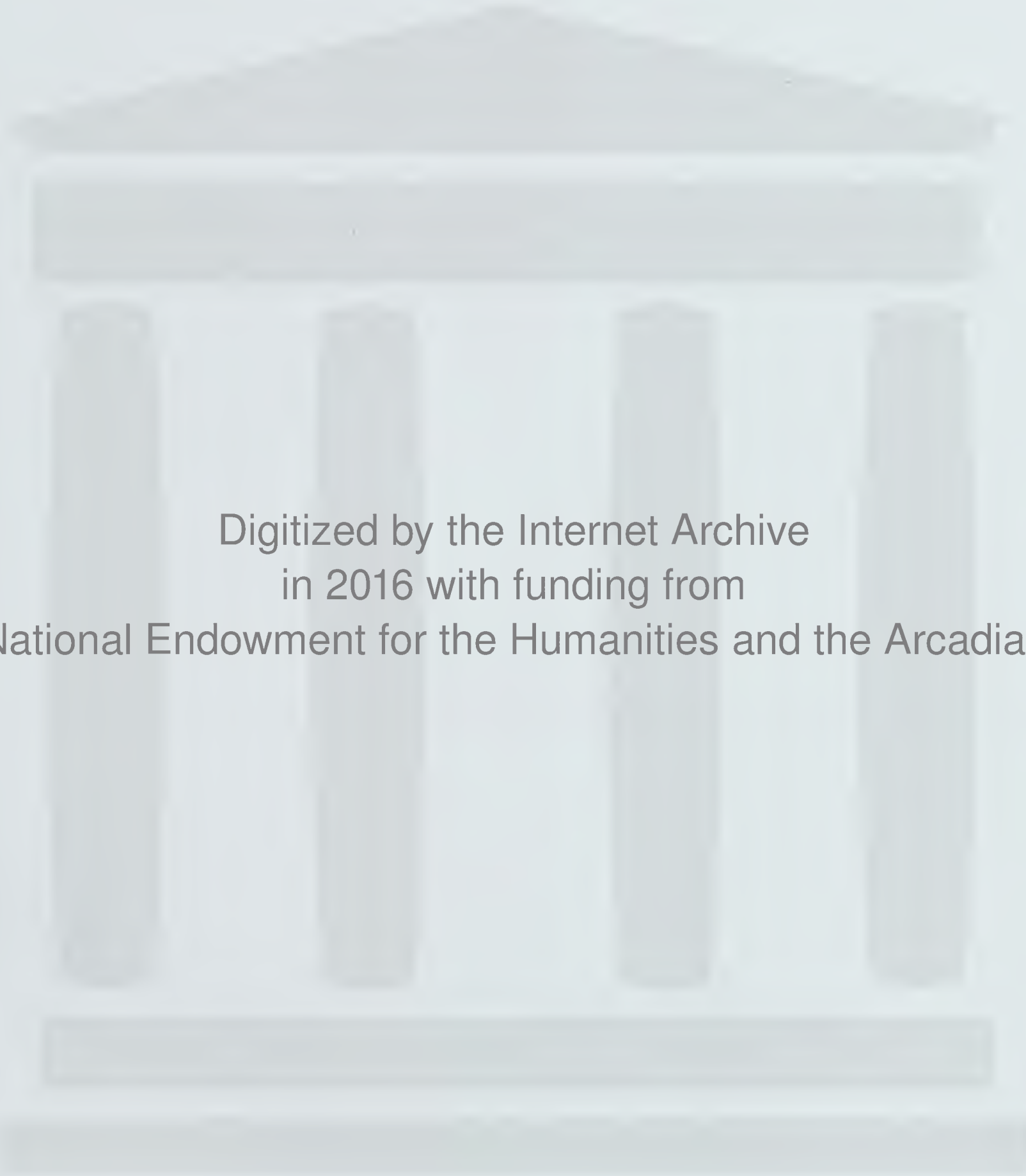


UNIVERSITY OF CALIFORNIA
SAN FRANCISCO MEDICAL CENTER
LIBRARY





Digitized by the Internet Archive
in 2016 with funding from
The National Endowment for the Humanities and the Arcadia Fund

THE JOURNAL

of

The Medical Association of the State of Alabama

U.S. MEDICAL CENTER LIBRARY

JUL 22 1958

San Francisco, 22

Vol. 28, No. 1
\$3.00 per Annum, 25c per copy

July 1958

Published Monthly in Montgomery
at 17 Molton Building

C O N T E N T S

What Should We Ask of Psychiatry? The 1953 Jerome Cochran Lecture. R. C. An- derson, M. D., Columbus, Ohio.....	1	Infection in Hospitals.....	14
Stricture of the Common Bile Duct. Etiology, Prevention and Surgical Treatment. Har- well Wilson, M. D., Memphis, Tenn.....	5	Thinner Executives.....	15
A 56-Year Progress Report of a Case of Gas- trostomy. Kirk R. Deibert, M. D., Florence, and Loren Gary, Jr., M. D., Tuscumbia.....	8	Utilization of Health Insurance.....	16
Physical Medicine and Rehabilitation in Chronic Illness. F. F. Schwartz, M. D., Birmingham.....	10	President's Page.....	17
Editorial Section.....	14	Organization Section.....	18
Cardiac Stimulant Effects of Adrenalin.....	14	Program of the Association.....	18
		Medical Center News.....	26
		State Department of Health.....	30
		New Program of the Department.....	30
		Specimens Examined.....	31
		Current Morbidity Statistics.....	32
		Provisional Birth and Death Statistics.....	32

Entered as second-class matter July 9, 1931 at the post-office at Montgomery, Alabama, under the Act of March 3, 1879

Lilly

QUALITY / RESEARCH / INTEGRITY



Therapy which includes

ULTRAN

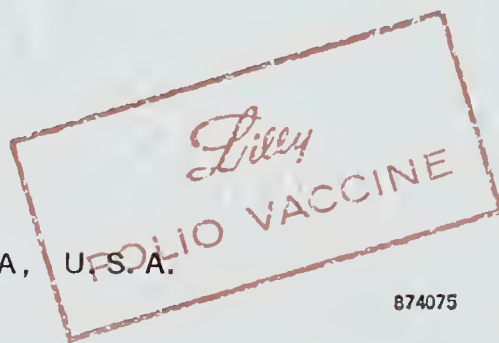
(Phenaglycodol, Lilly)

improves 82% of patients
with insomnia due to anxiety

300-mg. pulvules; usually 1 t.i.d.

200-mg. tablets; usually 1 q.i.d.

ELI LILLY AND COMPANY, INDIANAPOLIS 6, INDIANA, U.S.A.



874075

*both
provide
potent
corticosteroid
therapy...*

PARACORT* &

PREDNISONE, PARKE-DAVIS

*3 to 5 times the activity
or hydrocortisone*

supplied: PARACORT and PARACORTOL are available as 5-mg.
and 2.5-mg. scored tablets; bottles of 30, 100, and 1,000.



PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

July 1958

No. 1

WHAT SHOULD WE ASK OF PSYCHIATRY?

THE 1958 JEROME COCHRAN LECTURE

R. C. ANDERSON, M. D.

Assistant Commissioner, Mental Hygiene

State of Ohio

Columbus

I wish to express my appreciation to your President and to your organization for the honor of being invited to appear on your program. That in itself is a sufficient honor, but it is a rare privilege indeed to be invited also to deliver the Jerome Cochran Lecture. Dr. Jerome Cochran, I am informed, probably exerted a more constructive influence on your Association and, in fact, upon organized medicine than has any other single member. He was a scholar, a physician, a soldier, a teacher, a scientist, an epidemiologist and a parliamentarian. It is indeed an honor to be asked to speak in his recognition and I deeply appreciate it.

The subject which I propose to pursue today seems all the more appropriate against the background of Dr. Cochran's distinguished career. Perhaps the title of my paper should be explained since it is somewhat enigmatic and may be provocative. I am a member of a larger fraternity of medical practitioners, as well as a member of a small specialized group of that fraternity. I propose a demand from medicine to the specialty of psychiatry. It is entirely proper for the rest of medicine to make demands upon the psychiatrist since the reverse has been true for years. The psychiatrist has persistently demanded that the rest of the medical profession assume an increasing share of the burden of understanding and treating psychological illness and this is entirely proper. The response to this demand has been outstanding and universal. It is equally proper that the rest of the medical profession should remind the psychiatrist of his medical responsibilities.

It should be established that the demand which I propose is already on the way to being satisfied through the gradual reestablishment of a responsi-

ble medical leadership in the specialty of psychiatry. The rest of medicine must insure that that leadership is maintained and that it does not again allow itself to become engulfed in a wave of popular demand and by the personal ambitions of a relatively few vocal individuals. The capacity for being vocal, with an attendant knowledge of the wizardry of words, and of the power of manipulative semantics, is what permitted the establishment of a temporary psychiatric leadership which is now waning and, in my opinion, should not be reestablished.

In 1957 a former president of the American Psychiatric Association addressed your organization and, in emphasizing the magnitude of psychiatric illness, called upon all of the medical profession to enlist in the cause of its conquest (Appel¹). It is to his everlasting credit that three years before, in his capacity of President, he had traveled the length and breadth of the land, appealing and even pleading that medical schools, public health agencies, subsidiary and allied groups, and, most of all, psychiatrists themselves make some time available and devote some attention to the problem of the thousands of seriously mentally ill patients who are hospitalized. It is well to bear in mind that it is in the name of these patients that all appeals are made for funds, for psychiatric and public education, and for lay and professional support. It is also well to bear in mind that, while this patient population has increased one and a half times in the past decade, the number of qualified psychiatrists has quadrupled in the same period. In each of the past two years, for the first time in history, the population of our mental hospitals has decreased rather than increased. While

1. Appel, Kenneth E.: The Psychiatrist, the General Practitioner and the Community, J. M. A. Alabama, 27: 73-78, Oct. '57.

Read before the Association in annual session, Montgomery, April 18, 1958.

this may be coincidence, your former speaker must have reason to feel that his plea did not fall on deaf ears. This state of affairs has not come about by accident nor as the result of a gradually developing psychiatric philosophy and program. It has been the direct result of a reawakened active medical leadership in the psychiatric profession, stimulated in large part by the results of new chemotherapeutic approaches, but in no way dependent upon them. The so-called "new psychiatric drugs" are by no means a panacea but they have again encouraged the psychiatrist to attack his problem in the traditional scientific, medical manner which has yielded such spectacular progress in practically every other field of medicine in the past twenty years. As the result of this influence, psychiatric education and research are once again proceeding along the same paths as the rest of medicine.

Nowhere else in the field of medicine has it been necessary to remind the practitioners of a specialty that they were overlooking and neglecting the area of their major responsibility. Nowhere else have the members of a specialty made such demands upon others, both in and out of the medical profession, to assume their responsibility. It has been this lack of real responsibility in a group which calls upon others to assume ever-increasing responsibility which has been most perplexing to the medical profession and the public. It could not stem from an orientation which was basically medical. It may be that this lack of responsibility has caused Sheldon² to describe the vocal group, earlier referred to, as predatory, greedy and devoted to a Dionysian mysticism which might be called "delinquency." He adds that this philosophy discredits those biological concepts which are the foundation of medicine and those theological concepts which are the foundation of Christianity.

During the early years of the past one and one-half decades, when the medical leadership of psychiatry was approaching its nadir, the position of organized psychiatry was best described as negative, and expressed itself in announced opposition to real or implied evil. In fact, the chief characteristic of the non-medical philosophy, then in increasing vogue among a small group of self-styled psychiatric leaders, was that the removal of evil, as defined by themselves, constitutes the total aim of psychiatric treatment. Moloney³ has commented on this. Thus, following World War II, these vocal psychiatrists announced that they were against ignorance concerning psychiatric phenomena on the part of both the medical profession and the public. They also announced that they were

against the understaffing of psychiatric hospitals, custodial care for the ill, treatment by unqualified persons, lack of organized subsidization of research to their field, and to political interference and control in hospitals intended for sick men and women. By inference and counter assumption, the position might be established that they favored education, promoted adequate staffing of hospitals, believed in medical treatment of the mentally ill, favored research into the causation and methods of treatment of mental illness, and deplored the possibility that activities devoted to idealistic pursuits could be misused for selfish purposes. There has been some disturbing evidence that such assumptions would not have been correct.

For some time following World War II a considerable amount of true education of the public did occur. However, it was here that the engulfment of true medical leadership has been most striking in certain areas. The psychiatric education of the public came more and more to approximate a propaganda campaign. The public was treated to a vast amount of misleading and contradictory information, often emanating from the same source at different times. Heavy emphasis was placed upon statistics which were completely incapable of reconciliation. Education gave way to publicity based upon the spectacular, the newsworthy and that which could not lend itself to meaningful analysis. Consider a national telecast which was made and repeated in many areas by popular demand. A case of severe mental illness recovered before the eyes of an intrigued audience of millions. An implication was made to that same audience that if all mental patients could receive the same sort of treatment, they would all recover. What was omitted was that the patient had not recovered, was still receiving treatment, and later received additional treatment from a therapist whose talents were hopefully more therapeutic than Thespian. These techniques have produced confusion, skepticism, suspicion and resentment on the part of the thinking public.

Partially as a result of this reaction, the public has more recently been subjected to a new type of "educational" approach. Whether it is so intended or not, the public has interpreted this approach to mean that mental illness is so understandable, so prevalent and so benign that it can be considered as equivalent to normal. One authority now tells his audiences that every one has, or will have, mental illness. Some years ago he told them that one out of twelve would suffer this misfortune. His present position is equivalent to saying that one out of one people will die. A constant reiteration of that last unquestioned fact could only develop an attitude of passive acceptance or an active panic. In psychiatry this technique has tended to produce the former reaction

2. Sheldon, Wm. H.: *Varieties of Delinquent Youth*, Harper and Bros., 1949.

3. Moloney, James Clark: *The Emotional Convictions of the Analyst*, *Dis. Nerv. System* 18: 465-467, Dec. '57.

and it would destroy the basic and traditional medical objectives of the specialty.

On the brighter side, great progress has been made in the psychiatric education of the medical profession. This is especially true at the undergraduate level. Paradoxically enough, postgraduate psychiatric education in some centers has drawn farther away from traditional medical principles. Other physicians recognize that psychiatrists from these training centers are more vulnerable than are they to the charge of neglecting the total patient. This is reflected in the attitude of a public which speaks of psychiatrists as opposed to "real doctors," "medical doctors," etc. It will be corrected as postgraduate education follows the lead established in our medical schools.

This trend in postgraduate psychiatric education made for little improvement in the staffing patterns of mental hospitals. Some presumably qualified psychiatrists visited some such hospitals upon the premise that, with respect to the vast majority of mentally ill patients, the most desirable function of the psychiatrist is to teach rather than to heal. This has its counterpart nowhere else in medicine. While the rest of medicine pointed with pride to the fact that its training had become almost solely patient centered, psychiatry in its more advanced spheres loftily announced that its training was resident centered. It is obvious that neither hospitals, training programs, students nor teachers which function around this concept will be of primary benefit to patients. Further, the products of such programs may be expected to devote their professional skills to about 5% of the patient need. This attitude, foreign to most medical educators and students, that the doctor-patient relationship must benefit the former more than the latter, has also caused Sheldon² to remark that some psychiatrists are vastly concerned with their "gettings."

Opposition to custodial care of the ill has not always manifested itself as active treatment. Too often there has been a frantic urge to remove patients from the horrors of custodial care to the benefits of no care at all. Attempts have been made to bridge this gap by such euphemistic devices as foster homes, rest homes, nursing homes, etc. The enormous increase in facilities of this kind has been the direct result of active effort by psychiatrists. Unfortunately, neither they nor necessarily any one else assumed any medical responsibility for these activities. The states in the union which have pointed with loudest pride to the steadily decreasing population in their mental hospitals have not mentioned the even greater increase in the population of their nursing homes. Nor have they mentioned that those facilities have a staffing and supervisory pattern, both quantitatively and qualitatively, which would have

seemed archaic in their own hospitals 25 years ago, although they deplore the fact that those hospitals have not yet achieved optimal staffing patterns. Supervision and approval of these adjunctive facilities are now also progressing under a responsible medical leadership.

The interest in the treatment of the mentally ill by qualified persons has not necessarily indicated an interest in adequate medical treatment. For too long it was an interest in who might have the right to employ certain specialized psychological techniques, which are dependent upon the quality of an interpersonal relationship, and which are in no way medical. There is no scientific evidence that these techniques are any more potentially beneficial or any more potentially harmful in the hands of one individual than another, regardless of his professional background or the type or extent of training he may or may not have had. There is also no reason to suppose that these techniques are synonymous with psychiatric treatment or the profession of psychiatry. Rather they are a small part of a total therapeutic armamentarium to be prescribed and used as indicated. This principle has also been formally recognized by the psychiatric profession in the past few months.

While psychiatry has been more barren in truly scientific research than any other field of medicine in the last 20 years, medical leadership, again chiefly in relationship with our medical schools, is beginning to change that. Those imbued with non-medical philosophies a few years ago were prone to defend the absence of psychiatric research on the grounds of lack of funds and certain peculiarities of their profession known only to them. They insisted upon elaborately organized and heavily subsidized research laboratories to correct the former. While few of the great medical discoveries have come from such a setting (Salk vaccine is a notable exception), many have been improved and refined there. It is of some interest to note that in one of the most heavily subsidized and publicized psychiatric laboratories in the world not a single scientific finding has come to light in 25 years which has materially altered the life or illness of any mentally ill patient. The "discovery" that human beings react more favorably if treated as human beings is hardly new.

The difficulty with psychiatric research has been one of attitudes perhaps best understood in terms of the following quotation⁴ from Wheelis:

"If he (the psychiatrist) has the freedom to be skeptical, he will be irritated by dogmatic instruction and will be chagrined to observe that, whereas societies of biologists and chemists easily accommodate exponents of contradictory hypotheses,

4. Wheelis, Allen: The Vocational Hazards of Psychoanalysis, *Internat. J. Psycho-Analysis* 27:171-184, 1956.

societies of psychoanalysts are split by such differences."

Only psychiatrists of this persuasion have persisted in the smug attitude that only they "know." Only they deride the traditional medical methods of searching for causes. Only they "know" that you are deluded if you find a cause which does not fit into an already established and unsatisfactory body of knowledge to which no addition has been permitted in 50 years. As long as they "know" these things, they will never increase their knowledge. Medical leadership in our medical schools is rapidly changing this picture.

The elimination of political influence of the party type from our mental hospitals has largely been accomplished. In too many instances, however, it was replaced by a naked bid for power for the sake of power alone on the part of individuals in the psychiatric profession whose need for self-aggrandizement chose this means of expression. To excuse this on the basis of purity of motives is to use the same dangerous argument employed a few years ago by a little man with a loud voice and a ridiculous mustache. The nature of men and their needs is more important than the nature of their politics or institutions.

I propose that upon this report of increasing progress the rest of the medical profession should make its demands upon psychiatry. These demands have already been made in part and have borne some fruit and this must continue. What should we ask?

We should ask that psychiatry continue to bolster the newly-awakened medical leadership that is founded on service, honesty and courage. That leadership must remain resolute and steadfast, guiding its following instead of riding a tide until it is itself engulfed. It must be devoted to the premise that psychiatry is a branch of medicine and its practitioners must be ever mindful of that fact.

We should ask psychiatrists to remember that their mission is with the sick and that those who cannot find satisfaction through service to the mentally ill should seek other pursuits.

We should ask psychiatrists to promote an honest education of the public which emphasizes proven strengths and admits serious defects. Mental illness should not be presented as any more normal or desirable than any other serious illness, nor a cause for any greater alarm. Psychiatrists should encourage the public to understand that, while mental illness may often be helped, it often may not and that ignoring it through acceptance does not alleviate individual suffering.

We should ask psychiatrists to remember that they have a total responsibility as mature profes-

sional members of society. Their responsibility includes that to their patients, to society and to themselves. The responsibility to their patients is a sacred trust which cannot be relinquished through refuge in euphemisms or even "education." Those who see in psychiatry an opportunity to escape such responsibility should also be encouraged to seek elsewhere. Whether a discipline built around such a philosophy survives or perishes is not of primary concern to medicine, but medicine should insist that it not be a part of psychiatry.

We should ask the medical leadership of psychiatry to impress upon its following a sense of honest humility, an admission of ignorance and a willingness to approach its problems in the tradition of medical science. That following should be encouraged by any progress but should never cease to search for the ultimate final answer. If that answer is never found, the psychiatrist must remember, as do other physicians, the need to dedicate himself to the relief of suffering other than his own.

And finally, in order to place these demands in their proper perspective, medicine might ask psychiatry a paraphrase of a question plagiarized from the American musical comedy stage. It is, "We know what you have been against, will you show us what you are for?"

Doctor Outlines Reasons for Anemia in Infants—The number of infants and small children who develop iron deficiency anemia continues to be a "shocking public health problem," a Tennessee physician said recently.

However, the blood disorder can be prevented if the susceptible infants are recognized and given extra iron, Dr. Calvin W. Woodruff, Nashville, said in the June 7 *Journal of the American Medical Association*. Iron is necessary for the production of red blood cells.

During a three-year period he studied 272 anemic children under the age of five years at a clinic associated with Vanderbilt University School of Medicine.

The most significant factors in predisposing a child to anemia were low birth weight, high birth order, twinning, and masculinity. A diet poor in iron did not appear to cause anemia, since these children ate the same diet as did other children who did not become anemic, Dr. Woodruff said.

Prematurity or low birth weight was the most common factor, he said, adding that premature infants tend to grow faster during the first year of life than do full-term infants, thus requiring larger amounts of iron. Boys also grow more rapidly during the first year of life than do girls.

Twenty-six of the infants were twins. Both members of nine pairs were anemic; only one member was anemic in eight instances. Twenty of the twins were premature on the basis of birth weight.

The study also showed that the incidence of anemia in white infants increased as birth order increased, reaching a peak with the fourth-born infant. In Negro infants the peak was for second-born infants.

There is also a factor of deficient iron stores at birth, resulting from blood loss during delivery or because the mother is anemic, Dr. Woodruff said.

STRICTURE OF THE COMMON BILE DUCT ETIOLOGY, PREVENTION, SURGICAL TREATMENT

HARWELL WILSON, M. D.

Memphis, Tenn.

Stricture of the common bile duct is generally agreed to be one of the most serious lesions encountered by the general surgeon. The successful management of strictures of the common duct frequently requires a greater degree of surgical judgment and technical skill than is necessary for the proper management of many other surgical conditions. Because of the serious nature of such strictures, it is important for all surgeons to be well acquainted with the cause, prevention and correction of this condition.

ETIOLOGY OF BENIGN STRICTURE OF THE COMMON BILE DUCT

In occasional cases, stricture of the common bile duct is the result of inflammation which has occurred in or about the duct. In rare instances, such an inflammatory reaction occurs secondary to a large duodenal ulcer. The great number of patients, however, who suffer from duodenal ulcer and the relative infrequency in which the complication develops show that this is certainly an exception rather than the rule. It is true that occasionally a patient will develop a stricture of the common duct after a stone has been impacted in the duct. In such a case an inflammatory reaction, followed by cicatricial contracture, is responsible for the stricture.

The majority of common duct strictures occur as a sequel to cholecystectomy. Warren Cole stated that, in his experience at the University of Illinois Research Hospital, it was found that common bile duct stricture was preceded by biliary tract surgery in 75% of the cases. Cattell cited a relationship of 80% between benign strictures of the common duct and previous gallbladder surgery. Walters, reporting on the experience at the Mayo Clinic, stated that there was a 90% relationship. While occasionally benign stricture of the common duct is the result of inflammation in or about the duct, the great majority of these lesions occur as a result of injury to the common duct which occurs at the time of removal of the gallbladder. It should be emphasized that congenital anomalies may be present and may make the occurrence of such an injury more likely.

COMMON DUCT INJURY FROM OPERATIVE TRAUMA

Most patients suffering from stricture of the

From the Department of Surgery, University of Tennessee, Memphis, and the Baptist Hospital and City of Memphis Hospitals.

Read before the 7th Scientific Meeting, Alabama Chapter, American College of Surgeons, Point Clear, Alabama, Jan. 31, 1958.

common duct give a history of having previously had the gallbladder removed. In a study of such cases it is interesting to note that a review of the initial operative record usually reveals that the cholecystectomy falls into one of two types of cases. In some instances the operative notes show that the operation was a most difficult one. In such cases there may have been difficulty in controlling hemorrhage at the time of operation or there may have been great difficulty in securing adequate relaxation and proper exposure of the vital structures due to other causes. It is easy to see that the duct would be more likely to be injured in a case where adequate exposure is not obtained, whether this be due to obscurity of the wound from hemorrhage, from lack of proper retraction, or because the structures were obscured due to extensive inflammation.

The common duct may also be injured in what appears to be a very easy gallbladder operation. In such instances traction has usually been applied to the gallbladder and cystic ducts, thereby producing a "tenting" of the common duct. When this occurs, the clamp intended for the cystic duct is inadvertently placed across the tented common duct. The ligature is applied, the duct is divided, and after a few days the patient frequently becomes jaundiced. There may be profuse drainage of bile from the wound, provided the surgeon is fortunate enough to have placed a drain in the abdominal cavity. Otherwise, these individuals are apt to die from bile peritonitis.

In a number of cases the common duct has been inadvertently injured while the surgeon was blindly applying hemostats in an attempt to control hemorrhage from the depth of the wound. Experienced surgeons have repeatedly emphasized the great danger of applying hemostats blindly in the region of the common bile duct, and the same applies to the use of suture ligatures in the depth of such a wound where the structures are not clearly identified.

The simple maneuver of compressing the hepatic artery between the index finger and the thumb by the surgeon or his first assistant will usually result in an immediate cessation of hemorrhage from an unsecured cystic artery. After the index finger has been placed in the foramen of Winslow and pressure exerted by the index finger and thumb to temporarily stop the flow of blood through the hepatic artery, one is able to remove the excess of blood from the wound with suction and with sponges and then, when the pressure being exerted

by the index finger and thumb is slightly released, the actual bleeding point can usually be seen and clamped with a hemostat.

In general, we prefer to remove the gallbladder in a retrograde manner. However, in certain instances, because of anatomical variations or because of the presence of a marked inflammatory reaction, it is best to remove the gallbladder from the fundus downward. In still other instances, if the inflammation is so severe as to make the clear visualization of the duct difficult, the procedure of choice is cholecystostomy. Certainly it is much better simply to drain the gallbladder and subject the patient to a second operation for removal of the gallbladder than to take a chance on injuring the common duct. As has been repeatedly emphasized, no structure should be divided until it is carefully identified. The gallbladder and extrahepatic biliary ducts are subject to a number of congenital anomalies. It is important that the surgeon be familiar with these various anomalies, although no one surgeon will ever encounter all of the varied possibilities. Adequate anesthesia, good lighting, and adequate retraction and assistance are all important in preventing the development of this unfortunate complication.

METHODS USED FOR THE REPAIR OF COMMON DUCT STRICTURE

The many different methods which have been advocated for repair of stricture of the common duct give adequate proof of the fact that no single method has been successful in every case. Until relatively recently, there were only two general methods which might be used for the correction of this lesion. One method consisted of performing an end-to-end anastomosis of the duct, and the second method consisted of making an anastomosis between the proximal end of the duct above the area of stricture to some portion of the gastrointestinal tract, either the stomach, duodenum or jejunum. In 1948, Longmire introduced a third method—that of intrahepatic cholangiojejunostomy, which may be lifesaving in a patient where the extrahepatic bile duct has been destroyed as a result of trauma and/or inflammation.

It is generally agreed by most surgeons that, where feasible, the best method for repair of a common duct stricture consists of excising the area of stricture and uniting the duct by end-to-end anastomosis. This anastomosis should be carried out over a stint and it is definitely preferable to bring the catheter or T tube out through an opening either below or above the area where the end-to-end anastomosis has been performed. The chief difficulty with this method is the fact that, frequently, sufficient duct cannot be found to allow a satisfactory end-to-end anastomosis. Lahey and Cattell emphasized the method of securing addi-

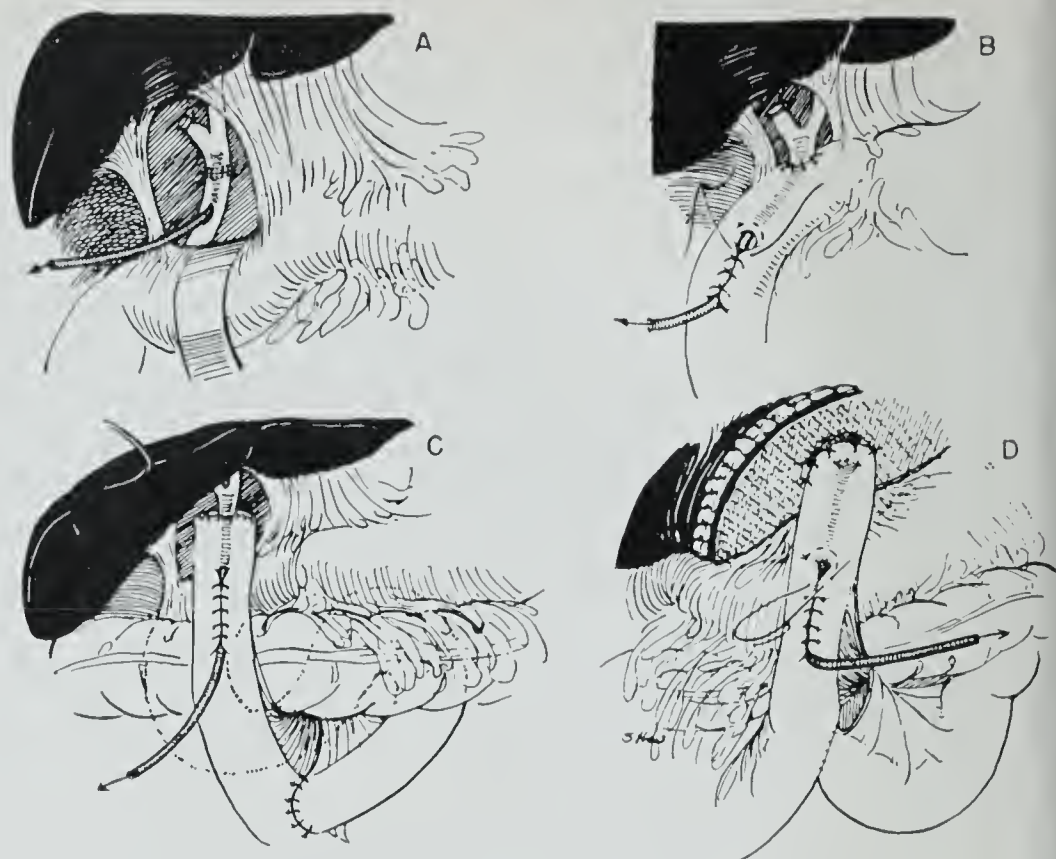


Figure I.

Drawing illustrates various methods of repair after excision of stricture in common duct.

a) End-to-end anastomosis with catheter or T-tube brought out through separate opening in duct.

b) Anastomosis of proximal end of duct to duodenum. Anastomosis made over catheter which is brought to the outside, using the Witzel technique where the catheter leaves the duodenum.

c) Roux en Y loop used in repair in order to allow anastomosis of proximal duct to a defunctionalized loop of small intestine.

d) Intrahepatic cholangiojejunostomy, anastomosis of left intrahepatic duct to Roux en Y loop after resection of a portion of the left lobe of the liver.

Illustrations are printed by permission of the Memphis Medical Journal.

tional length of the duct by reflecting the duodenum and, where necessary, splitting the head of the pancreas in order to further mobilize the duct. The fact still remains, however, that in many individuals enough remaining duct cannot be found to carry out a satisfactory end-to-end suture.

The method which is applicable to the majority of common duct strictures consists of suturing the proximal end of the strictured duct to some portion of the upper part of the gastrointestinal tract. In such cases, the operation is begun by making a search for the proximal end of the common duct. Adhesions always present a difficult problem in such cases. There is usually, also, considerable difficulty with bleeding as a result of the necessity of dissecting through the dense adhesions adjacent to the liver. The dissection is kept close to the inferior border of the liver and is continued down to the region of the hilus of the liver. In many instances the duct will be found very close to the junction of the right and left hepatic ducts. If one is unable to find the distal end of the duct, a satisfactory result, in many cases, can be obtained by suturing the proximal end of the duct into the duodenum or stomach. It is important to empha-

size that in carrying out such an anastomosis one must be careful to make the anastomosis between the mucosa of the duct and the mucosa of the intestinal tract. It is our custom to use four to six interrupted 4-0 chromic sutures to unite the mucosa of the proximal end of the duct to the mucosa of the duodenum. In certain cases where the duodenum or stomach may not be easily mobilized without tension, a Roux Y loop of jejunum may be brought up and sutured to the proximal end of the common duct as has been emphasized by Allen. With a defunctionalized loop of jejunum as is made possible by use of the Roux Y, there is less likely to occur ascending infection than would be the case with a simple anastomosis done between the jejunum and the common duct, even though this might be followed by an enteroenterostomy.

We have occasionally been unable to find any common bile duct, any common hepatic duct, or even to identify the right and left hepatic duct. This usually occurs in patients who have been subjected to previous operations and who have had longstanding infection. In this type of case the Longmire operation of intrahepatic cholangiojejunostomy may be a lifesaving procedure. Our first experience with this operation was in 1948 and the first patient upon whom we operated by this method is, at the present time, in good health and shows no evidence of obstruction of his biliary tract. This method consists of removing a portion of the left lobe of the liver in order to find the dilated intrahepatic duct. After this duct has been found, a small amount of liver tissue around the duct is curetted away and an anastomosis is then made between the dilated duct and a Roux Y loop of jejunum. The success of the operation is based upon the fact that this duct communicates with the duct from the right lobe of the liver. This offers a method by which a satisfactory duct may be found in the few patients where one is unable by any other method to find a duct which will drain the liver.

It should be pointed out to those who are unfamiliar with this technique that it is not applicable for use in infants suffering from atresia of the extrahepatic bile ducts. It has been found that in the majority of cases infants suffering from atresia of the extrahepatic bile ducts will also be found to have an atresia of the intrahepatic bile ducts.

SUMMARY AND CONCLUSION

1. Benign stricture of the common bile duct occurs most frequently as a sequel to cholecystectomy; however, it may rarely result from inflammation in or about the duct.

2. The importance of prevention of stricture of the common bile duct has been emphasized. Methods by which stricture of the common duct may

be prevented in the great majority of cases have been emphasized.

3. An outline has been given of methods of surgical repair of the duct.

899 Madison Avenue.

BIBLIOGRAPHY

1. Cattell, R. B.: Benign Strictures of the Biliary Ducts, *J. A. M. A.* 134: 235-240 (May 17) 1947.
2. Cole, W.: Strictures of the Common Duct, *Surg., Gynec. & Obst.* 82: 104-105 (Jan.) 1946.
3. Longmire, W. J., Jr., and Sanford, M. C.: Intrahepatic Cholangiojejunostomy with Partial Hepatectomy for Biliary Obstruction, *Surgeon* 24: 264-267 (Aug.) 1948.
4. Wilson, Harwell, and Gillespie, C. E.: Partial Hepatectomy with Intrahepatic Cholangiojejunostomy, *Ann. Surg.* 129: 756-765 (June) 1949.
5. Wilson, Harwell: Benign Stricture of the Common Bile Duct, *Am. J. Surg.* LXXX: 941-945 (December) 1950.

Harvard Lettermen Studied for Heart Disease—The value of exercise in preventing heart disease has again been shown in a new study of former Harvard College football players.

The study, made by Dr. William C. Pomeroy, Los Angeles, and Dr. Paul Dudley White, Boston, was reported in the June 7 *Journal of the American Medical Association*.

An attempt was made to follow up 424 Harvard students who won their football letters in the years 1901-1930. Of these, in 1955, 126 were known to have died and 292 to be alive, while six could not be traced.

The cause of death was known for 87 of the 126. Among these, coronary heart disease was responsible for 25 deaths, or 29 per cent. Cerebral hemorrhage, generalized arteriosclerosis, and congestive heart failure accounted for eight more deaths, making the total 33 cardiovascular deaths, or 38 per cent, the doctors said.

Cancer apparently caused 11 deaths; pneumonia and war injuries, 9 each; accidents, 8; suicide, 4, and miscellaneous, the rest.

These football players who showed coronary heart disease were compared to others without the disease for body build, weight gain, personal family status, family history, habits of exercise, use of alcohol and tobacco, and diet.

"One of the most significant findings in the study was the apparent protection afforded by the continuation of a program of heavy exercise," the doctors said.

"Those who maintained even moderate habits of exercise were less prone to coronary heart disease, and no individual in this study who maintained a heavy exercise program happened to develop coronary heart disease," they said.

The study also showed the following:

—Body build did not differ significantly between the two groups, but there was more weight gain in the coronary group than in the others.

—There were more divorces in the coronary group. This "may or may not" represent a factor of stress.

—There was a higher percentage of family history of coronary heart disease in the coronary group than in the control group.

—Smoking and drinking appeared to play no part in the development of heart disease, and the lack of details about dietary habits precluded any conclusions in this area.

A 56-YEAR PROGRESS REPORT OF A CASE OF GASTROSTOMY

KIRK R. DEIBERT, M. D., F. A. C. R.

Florence, Alabama

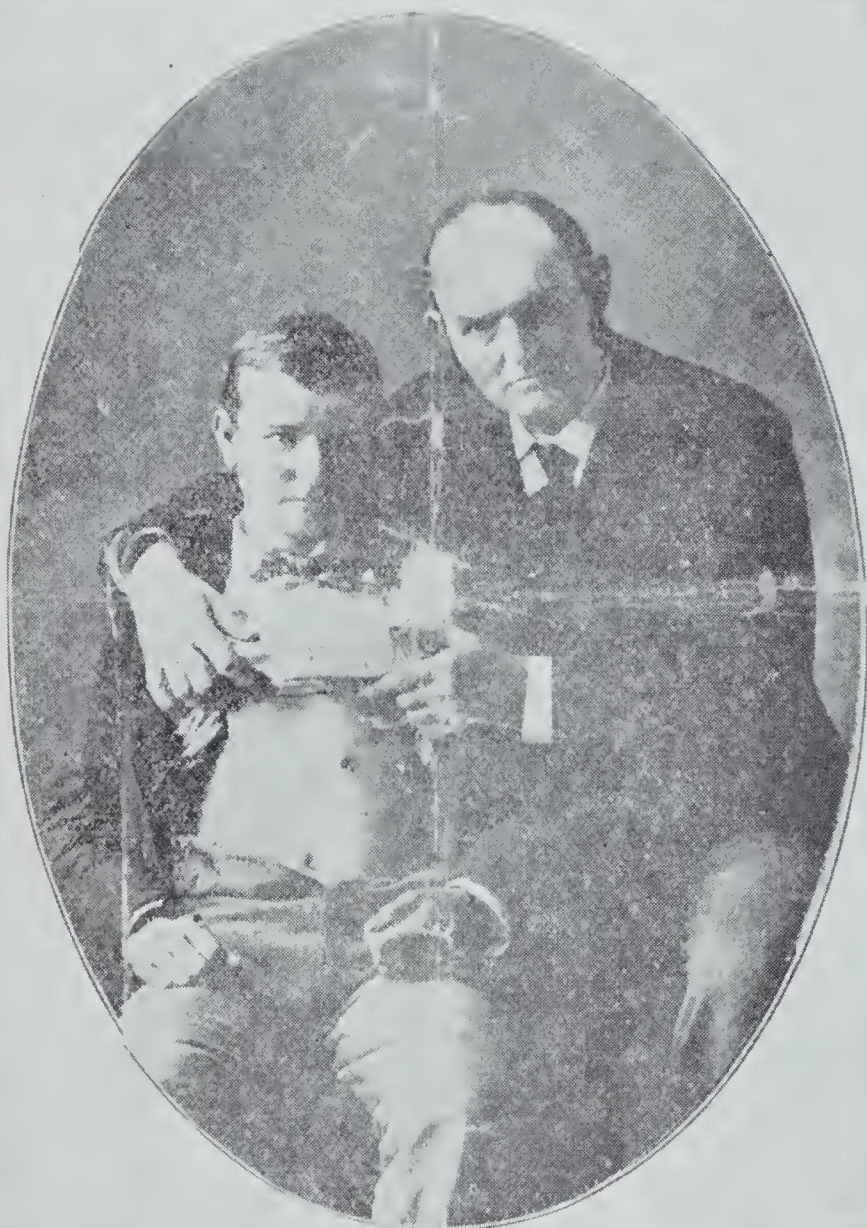
and

LOREN GARY, JR., M. D.

Tuscumbia, Alabama

The purpose of this communication is to give an interesting interim case report. The initial report was presented before the State Medical Association and reprinted in the *Mobile Medical and Surgical Journal*, August 30, 1901 (Figure 1). At that time the patient, Mr. A. O. G., aged 17, was seen by Dr. H. W. Blair, Sheffield, Alabama, for marked dysphagia. This complaint stemmed from a severe attack of typhoid fever in 1898. During a stormy recovery period he also contracted ma-

laria. He accomplished deglutition by swallowing his food and squeezing the bolus through the cardioesophageal orifice by manual massage at the xiphoid notch. The patient had lost a considerable amount of weight when first seen by his physician. After a period of observation it was decided to perform a gastrostomy on the youth. The patient arrived at the physician's office dehydrated and worn out by a four hour carriage ride during the peak of summer. To swallow



REPRINTED FROM

Mobile Medical and Surgical Journal

READ BEFORE ALABAMA STATE
MEDICAL ASSOCIATION

Fig. 1. Frontispiece of article by Dr. H. W. Blair, "A Case of Gastrostomy." This appeared in the precursor of the present state journal but 56 years have elapsed.

This picture that I have presented here, of this young man was taken nine weeks after the operation, showing him fully restored and starting on his journey home.

He returned to me February the 9th, 1902, for an operation on the stricture. He was swallowing his food in the old way by allowing it to pass down into the œsophagus and squeezing it through the small opening with his hands.

For several days each morning I used small bougies and whalebone fillets, searching in every way for the small opening, but failed to find it. I then took a small thread four or five feet long, split a small No. 8 shot with my knife, pressed it firmly to one end, and allowed him to swallow the shot end of the thread, fastening the other end to the buttonhole of his coat, and sent him to dinner with instructions to return after he had eaten. On his return I inserted a small blunt hook through the fistulous opening in the stomach, and easily fished up the silk thread he had swallowed; to this I attached a larger cord and drew it through the stricture; to this I attached a still larger cord, and to this a small rubber band, and pulling upon the cord leading out of the mouth with considerable force, I drew the rubber well into the stricture, and allowed it to remain all night.

This caused much pain and a restless night, and I found my patient with high fever the following morning.

I removed the rubber band and abandoned all treatment for a week. The fever subsided, and the rubber band was again inserted in the same way, and allowed to remain all night. A few nights later a still larger rubber band was attached to the cord, drawn into the stricture, and allowed to remain twelve hours, this seemed to straighten out this tortuous canal and dilate the hard cicatricial tissue that was thwarting every effort to proceed with my work.

After this I found it comparatively easy to introduce a bougie which was gradually increased in size every few days to a No. 34.

I sent him home with this; instructing him to introduce it twice a week. In a short while I expect to close the artificial mouth.

Fig. 2. This sample page of the report gives an insight to medical practice of 56 years ago. A diary of both the doctor and patient is given to include the patient's 4 hr. ride to reach the physician's office.

water was a difficult feat. The physician was faced with a new surgical procedure, to be performed without benefit of adequate anesthesia.

A gastrostomy was thus performed through which food and fluids were administered, so that the patient regained some of his lost weight. In February 1902, approximately nine weeks post-operatively, he was scheduled to return to have the ostium closed. However, in the interim, he continued in his attempt to swallow through the normal channel but to no avail. The surgeon then decided to dilate the esophageal stricture by a graduated bougie. Gradually the patient became able to swallow in a more normal fashion without subxiphoid massage. Two attempts were made to close the stomatal site, but they proved unsuccessful (Figures 1 and 2).

Present Physical Examination: The patient is pale and somewhat emaciated. The thorax is normal except for moderate cardiac enlargement. No murmur is heard while the rate and rhythm are normal. The blood pressure is 195/95 mm. Hg. The peripheral arteries are thick walled and tortuous, with a full prominent pulse being felt radially. The abdomen is scaphoid without evidence of a mass. There is a transverse scar in the left hypochondrium. In the midclavicular line, in the middle of the scar, a subchondral fistula is noted. A thin skin surface covers this fistulous stoma which, at intervals, drains fluid. Rectal examination is normal. The remaining chief bodily systems are normal.

Past History: The patient was hospitalized in April 1955 with pulmonary edema and left ventricular failure. This was complicated with hypertension and arteriosclerosis. He also complained of prior episodes of anorexia and vague disturbances of digestion but no frank weight loss.

Family History: His mother died at the age of 55 of some form of cancer and his father at the age of 79 of a "stroke" and hypertension. His three brothers died at a similar age range of some form of heart disease.

Present Illness: The patient was readmitted to the hospital March 3, 1957 stating that he became ill during the night one week ago. He experienced considerable nausea and emesis but no pain. A copious amount of blood was vomited and the following morning a black stool was passed. A marked weakness and dyspnea ensued. In the interim since his prior admission he had gained strength and weight but had no digestive disturbance. A red blood count of 4.11×10^6 , Hb. 12.2 gm. (77%), and a strongly positive guaiac stool test were noted.

Clinical Impression: 1. Arteriosclerotic hypertensive heart disease, 2. Herniated fistulous gas-

tric tract in left hypochondrium, 3. Bleeding peptic ulcer.

Radiographic Examinations: 1. April 10, 1955: P. A. Chest: The aorta is uncoiled and calcified with slight left ventricular prominence. Bilateral apical fibrosis and costophrenic angle blunting is seen but no suspicious peripheral infiltrate is identified. The bony thorax and mediastinum appear normal. 2. Barium Enema: The colon is elongated and redundant but no defect is identified. A few scattered diverticula of the pelvic colon are noted. 3. Gastro-Intestinal Study, April 11, 1955: There is coarsening and edema of the distal esophageal mucosa. A large gastric fundus diverticulum is present cephalad to which a deep subtracted notch-like defect is seen. There is a diverticulum of the second duodenum. A relaxed

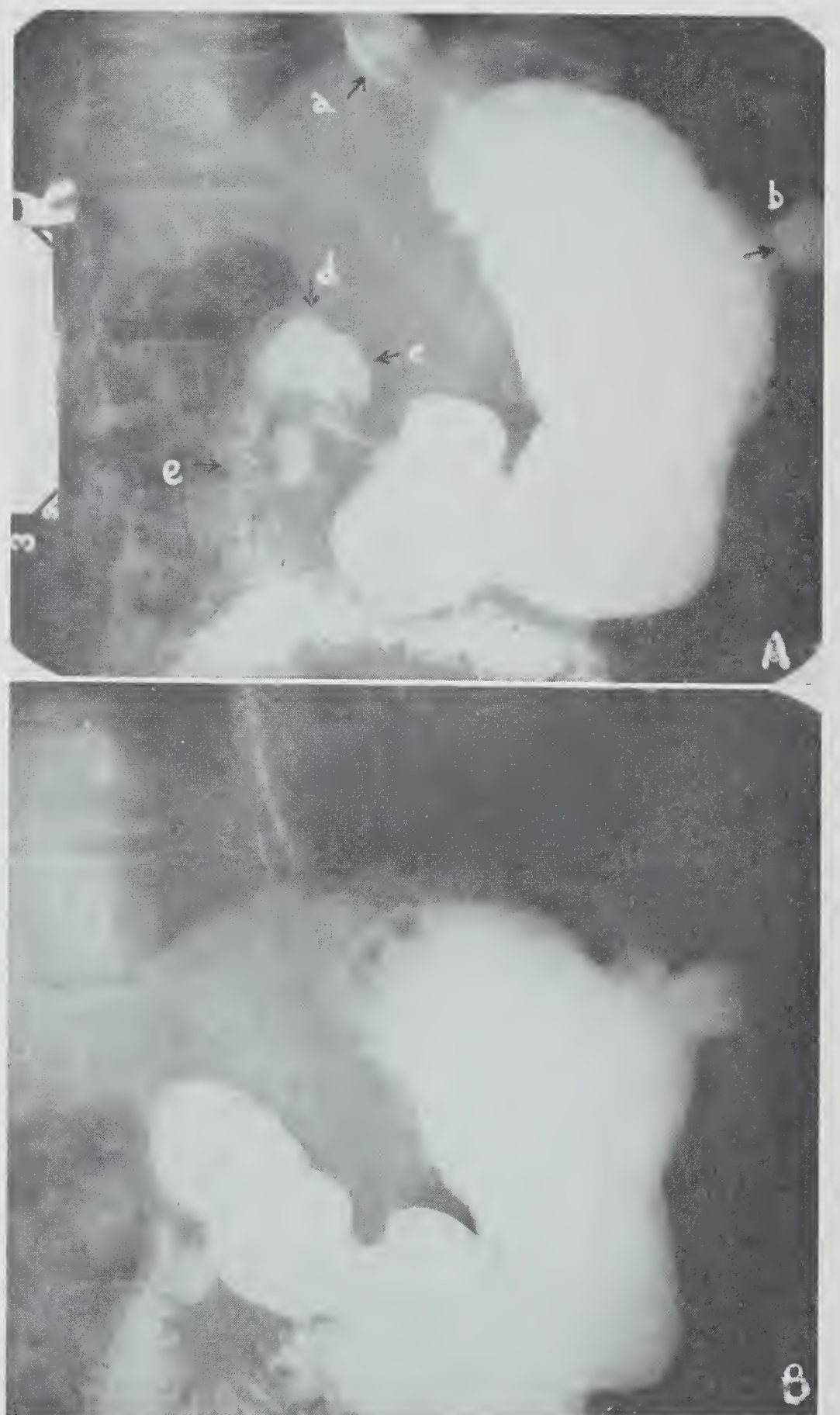


Fig. 3. Gastro-intestinal study, dual radiographs: A and B. The salient features are: a. hiatus hernia, b. gastric fundus diverticulum & cutaneous fistula, c. deformity of proximal bulbar recess, d. bulbar diverticulum, e. diverticulum 2nd duodenum.

right inguinal ring is noted. The coarse irregular small bowel mucosal pattern can be attributed to an irritative fluid vitamin imbalance. The gastric outpouching was thought to be due to a malignant ulcer. This report was rendered without benefit of the preceding clinical information. (See Figure 3 and compare B to A.) 4. Gastro-Intestinal Study, March 6, 1957: The preliminary fluoroscopic survey revealed prominence of the aorta and left ventricle. This was more pronounced than that noted at the prior examination and an irregular left ventricular pulsation was seen. There is prominence of the liver, and basal angular blunting is present. There is prominence of the phrenic ampulla associated with a hiatus hernia. Irritable tertiary wave form is identified in the distal esophagus, associated with mucosal edema to indicate an esophagitis. Neither a varix nor ulcer can be demonstrated. The gastric fundus diverticulum is again seen but this is not accompanied by a subjacent suspicious subtraction defect. A moderately generalized gastritis is present, and at this time barium passed through the outpouching to appear on the ventral skin surface to establish a fistulous tract. The second duodenal diverticu-

lum is again seen but a large post-bulbar diverticulum is identified to obscure a small contracted and scarred bulbar base. The interval examinations reveal a diverticulum at the ligament of Treitz, and numerous diverticula of the mid-jejunum are identified. The colonic diverticula are again noted in addition to the irritation reaction pattern of the small bowel that can be ascribed to a vitamin fluid imbalance.

Comment: A report is made of a white male patient aged 73, who, despite sustaining numerous illnesses at an early age, survived them; as well as the operative procedure of gastrostomy performed in 1901. He will be destined to a cardiac death but a failure of that organ has not bothered him appreciably. A diagnosis of duodenal ulcer was missed by the superimposition of a post-bulbar diverticulum. An important lesson is to be learned that close liaison between physician and radiologist in reference to detailed clinical story abstraction is needed to arrive at a proper diagnosis.

Box 22, Jackson Highway (Dr. Deibert).

121 E. 5th Street (Dr. Gary).

PHYSICAL MEDICINE AND REHABILITATION IN CHRONIC ILLNESS

FERDINAND F. SCHWARTZ, M. D.

Birmingham, Alabama

"The curfew tolls the knell of parting day
The lowing herd wind slowly o'er the lea
The plowman homeward plods his weary way
And leaves the world to darkness and to me."

Thomas Gray

Leaves the world to darkness and to me is the elegy of the thousands and even the millions of chronically ill patients who are imprisoned within the four walls of a hospital or a nursing home. A laconic smile endeavors to deceive the casual visitor but the noble heart within the suffering and ailing body is torn from hour to hour with solitude, neglect and loneliness. These individuals, probably only a short time ago, were the joy of a family circle, proudly contributing to the home, community and nation's welfare from the depth of their knowledge, skill and income for the betterment of society.

Most of them have attained maturity in life only to discover that their only reward is disillusion. Undoubtedly, it is a great medical achievement to

Presented to the Seventh World Congress of the International Society for the Welfare of Cripples, London, July 24, 1957.

The author is Associate Professor of Physical Medicine, Medical College of Alabama.

prolong life and to rehabilitate these chronically ill patients. Adding ten years to their lives does not compensate for ten years of condemnation to a wheelchair, thereby relegating them to absolute dependency upon the community and the family. We must face reality and understanding in order to make them more acceptable to themselves and to their loved ones. Yes, they are seeking acceptance among their fellow men rather than to be entombed on the wayside of inactivity.

They desire to exchange boredom for activity, frustration for love, pity for understanding, and dependency for the king provider of the family. Yes, they are searching for peace—peace of mind before the curtain of despondency drapes their burning desire with oblivion, thus creating conflict not only within themselves but even with their daily environment. The memory of the past might nurture them for a little while but the mirror of the present will reflect reality which cannot be wiped away with tear-moistened rags.

The New York State Legislative Joint Committee, reporting on the problem of aging, states the following: "Between 1900-1950 life expectancy at birth went up from 48.2 years to 65.5 years, more than 17 years added to the average man's life. At the same time, the average number of years of work-life expectancy went up from 32.1 to 41.9 years, an increase in work-life of about ten years."¹ The statistical curve went up in both instances, but let us not forget that the curve for acute illnesses went down and the graph for chronic illnesses is steadily going up. Therefore as life expectancy is increased so did the chronic illnesses.

We as physicians, and especially those of us who specialize in physical medicine and rehabilitation, must find a practical and logical way of lessening invalidism rather than to neglect it. Team work of all the specialties, including the good old family doctor, social workers, visiting nurses, vocational counsellor, preacher, family and his employer may spell the difference between success and failure.

The ground work of rehabilitation should start in the hospital room with loving care of a devoted family and friends in order to encourage the patient's volition to get well and to commence to shoulder family responsibilities by planning with him about the future with frankness and understanding.

As the prolonged illness confines the patient to the hospital, the frequency of letters, gifts, bundles of joy, and visits should increase rather than decrease. The occasional visit by his spiritual leader and his employer will heighten his hope. There is not one single person in this wide, wide world, whether healthy or sick, who does not cherish the comfort of his loved ones. A hospital may become an easy and restful shelter for the patient who may develop a total dependency on his physician and the ancillary force, and weaning away from this newly-found security might be a hard task. Therefore, careful planning and determined care on the part of everyone connected with the welfare of the patient are of the utmost importance.

These patients still possess some of the human attributes, such as love, anger, jealousy, envy, anxiety, frustration, disappointment, gregarious instincts and independence. Their anxiety and anger cannot and should not be dismissed casually as being those of a non-cooperative patient, but rather all problems, whether emotional or mental, should be discussed freely and openly by his physician and the family. In other words, physical rehabilitation must be supplemented with psychologic and spiritual rehabilitation. Stimulation of involved muscles, and active and passive exer-

cises of the joints, will neither eradicate nor strengthen the emotional and psychic involvements.

The degree of voluntary and active motion is not as important to the patient as allaying the fear and anxiety for the future in respect to his family, future employment and financial security. One of the cardinal virtues of a good physician is listening. Words, expressed by the patient, will often reveal not only the subjective symptoms but in many instances will help to correlate the objective symptoms for the sake of diagnosis and future prognosis. From the depth of defeatism, hope, but not false hope, will elevate the patient to a beneficial psychologic atmosphere. Tender, loving and devoted care should continue at home after his discharge from the hospital. The familiar sight of his pipe and smoking stand, the inviting aroma of his kitchen, the wagging tail of his beloved dog will aid in reestablishing his former identity.

Let us extend reality through actual living conditions and genuine approaches rather than through gadgets. If the patient is a female, she could be encouraged to partake in her housework, such as baking, cooking, and washing her fineries. Preparing her favorite salad, shaping her delicious biscuits, even though she is a victim of hemiplegia or rheumatoid arthritis, will not only motivate her but will gradually reglorify her ego as the queen of her home. Is it not just as important to reestablish her useful identity in the household as to reeducate her useless extremities?

The male patient may partake in the daily care of the house and yard, such as dusting, cleaning, polishing, and tending to the weeds and flower beds. He may even develop a hobby, such as painting, toy making, bicycle repairing, radio and television servicing, and numerous other occupations which will eventually reap the harvest of economical independence.

Thus, he may be trained in an occupation which is compatible with his physical condition. Basket weaving and belt making may be well and good to aid prolonged hospitalization but wherever possible the occupational and vocational trend should be in the channel in which the most fruitful vocation may be accomplished. What could basket weaving accomplish for a former banker or accountant? Nothing, but probably added psychologic trauma or degradation of the ego. However, typing, simple arithmetic problems, and elementary bookkeeping are the very essence of his former existence and reawakening of his skill for future rehabilitation.

Years ago in my home town there was a very prominent judge who had no upper extremities and yet he insisted on making his own court en-

1. Making the Years Count. Report, New York State Joint Legislative Committee, 1955, p. 88.

tries. That is motivation. In Curacao, Netherland West Indies, I observed a native woman who had bilateral amputation of her arms yet she could excel most able bodied females in the art of needlework. Yes, she was not only self supporting but she had independence of spirit with a peaceful mind. Our own Helen Keller of Alabama attained world renowned reputation through her God gifted rehabilitation. Motivation, both physical and psychologic, is the answer. It seems that Providence endows these handicapped individuals, whether acquired through trauma, disease or congenitally, with a sixth sense and sacred inspiration.

If every doctor and nurse would be confined in a hospital with trauma, sickness or surgery, how different would be their outlook toward the mental, physical and spiritual rehabilitation of the patient!

916 S. 20th Street.

7,000 New Physicians Licensed in U. S.—For the fifth consecutive year more than 7,000 new physicians entered the practice of medicine in the United States during 1957.

This was revealed in the 56th annual report of the American Medical Association's Council on Medical Education and Hospitals which appeared in the May 31 Journal of the American Medical Association.

Of the 7,455 new doctors licensed to practice, 5,872 licenses were given as a result of written examination and 1,583 by interstate reciprocity or endorsement of credentials.

During the same period, 3,500 physician deaths were reported, which reduces the over-all gain in the doctor population to 3,955.

In all, state and territorial boards issued 15,090 licenses during the year but 7,635 went to doctors already holding licenses from another state or to men who took examinations in more than one state.

The total number of licenses issued, both by written examination and reciprocity or endorsement of credentials, represents an increase of 547 over 1956.

In issuing 2,167 licenses California led all other states. New York was second with 1,355, while Ohio and Pennsylvania were next with 831 and 744 licenses respectively. Florida, Illinois, Maryland, and Texas each had in excess of 500. Nevada, with 15, licensed the fewest number of doctors.

During the year there were 9,116 applicants for licensure by written examination. Of these, 7,769 passed and 1,347 failed.

Included among those who took the examination were 6,244 graduates of approved medical schools in the U. S.; 185 from approved schools in Canada; 4 graduates of approved schools in the U. S. which are no longer in operation; 2,299 from foreign medical faculties; 42 graduates of unapproved medical schools in the U. S. no longer in existence, and 342 graduates of schools of osteopathy.

Three medical schools had graduates for the first time during the period. They were the University of Missouri, University of Saskatchewan, and the University of Mississippi. All of the graduates of the Mississippi school passed their written examinations.

Six other schools also had no failures among their graduates. They are Stanford University, University of California at Los Angeles and San Francisco, Yale University, Albany Medical College, and the University of Utah.

The graduates of foreign faculties of medicine include both American and foreign born and the 1,345 who passed the examination represent an increase of 333 successful candidates over 1956.

The number of licenses issued on the basis of geographical areas were: New England, 459; Middle Atlantic, 1,718; East North Central, 1,466; West North Central, 708; South Atlantic, 1,262; East South Central, 480; West South Central, 751; Mountain, 147; Pacific, 380, and territories and possessions, 104.

Dr. Gunnar Gundersen—AMA's 112th President—In taking the oath of office as 112th president of the American Medical Association June 24 in San Francisco, Dr. Gunnar Gundersen called attention to the physician's obligations on the international scene. The 61-year-old LaCrosse, Wis., surgeon said: "As both physicians and citizens we must see that medicine plays its full role, not only in promoting better world health but also in helping the search for brotherhood and peace."

As American citizens, Dr. Gundersen said, "our first duty is to this country. But as members of the brotherhood of man, we also have a duty toward all men who yearn for freedom, dignity and peace." He further pointed out that "medicine can play a vitally effective part in bringing reality to the dream of world peace. For medicine, despite the designs of politicians or dictators, is above the harsh conflicts of ideologies and power policies. Medicine, like religion, speaks a universal language which passes all barriers of race, creed, color and nationality."

Dr. Gundersen has been active in state and national medical affairs throughout his practice. He was president of the State Medical Society of Wisconsin in 1941-42, served on a number of the society's committees, and was speaker of its House of Delegates for about five years. He was a member of the AMA's House of Delegates in 1937-38 and was elected to the AMA Board of Trustees in 1948. He became chairman of the Board in June 1955. His keen interest in hospital affairs and the quality of hospital service led to his election as the first chairman of the Joint Commission on Accreditation of Hospitals when it was formed in 1951. He served in that capacity until 1953.

He now operates the Gundersen Clinic in LaCrosse, along with three of his physician brothers, Sigurd B., Alf H., and Thorolf E. Two other physician brothers, Drs. Trygve and Sven M. Gundersen, are practicing in Boston and Hanover, N. H., respectively. The Gundersen Clinic, which handles 3,000 to 4,000 new patients a year, was established in 1927. It attracts people from all over the United States and is operated in conjunction with the LaCrosse Lutheran Hospital next door.

Dr. Gundersen did his prep school work in Oslo, Norway, and returned to the U. S. to obtain his B. S. degree from the University of Wisconsin in 1917, and his M. D. from Columbia University in 1920. He served his internship and residency at LaCrosse Lutheran Hospital from 1920 to 1922. He is a diplomate of the American Board of Surgery, a fellow of the American College of Surgeons and the International College of Surgeons, a member of the Council of the World Medical Association, and a member of the American Public Health Association.

High School Scientists Exhibit in San Francisco—The American Medical Association was host to two teen-age scientists during its annual meeting in San Francisco. As a result of their winning the AMA's top citations at the National Science Fair in Flint, Mich., May 7-10, Clare L. Chatland, 16, Missoula, Mont., and David R. Brown, 15, Minneapolis, Minn., showed their exhibits to 30,000 physicians and guests at the San Francisco meeting.

David's exhibit on humeral transplants illustrated the method by which fetal mouse bones become ossified when transplanted into hostile media, and Clare's work was an experiment with mice showing how hypersensitizing agents enhance antigen-antibody reactions.

Their exhibits were chosen by a special AMA committee, headed by Dr. Alphonse McMahon, chairman of the AMA Council on Scientific Assembly, in a field of 281 entries from 41 states, the District of Columbia, Alaska, Hawaii, Germany and Japan.

In addition to the two top AMA awards, honorable mention citations were presented to Robert L. Sayre, 17, Huntington, W. Va., for his exhibit on "The Neuro-humeral Theory and Cardiac Inhibition," and to Barbara Ann Conway, 16, Chattanooga, Tenn., for her study of "Experimental Teratology," showing the development of congenital malformations when pregnant rats are subjected to stress.

Hundreds of county and state medical societies are now cooperating with and supporting their local science fairs, which send winners to the national competitions. The 1959 Fair, sponsored by Science Clubs of America, 1719 N Street, N. W., Washington, D. C., as an encouragement to the study of science, will be held May 6-9 in Hartford, Conn., and in 1960 in Indianapolis, Ind.

Texas Physicians Report New Heart Operation—The successful removal during "open heart" surgery of a ventricular aneurysm following a heart attack in a 50-year-old man has been reported by four Texas physicians.

During the operation, the heart was opened after the blood had been shunted into a bypass through the use of a mechanical heart-lung machine. This helped prevent complications that might have arisen if the heart were beating during the surgery, Dr. Denton A. Cooley and associates said in the May 31 Journal of the American Medical Association.

A ventricular aneurysm is a blister-like defect in the wall of one of the heart's chambers.

Ventricular aneurysms occur in from 10 to 38 per cent (depending on definition of the term) of persons who survive myocardial infarctions, the authors said. The presence of the sac on the ventricle wall interferes with the function of the chamber and may sharply reduce the heart's output. There is also the danger of the aneurysm's rupturing.

In the case reported, while the blood was shunted completely around the heart for 11 minutes, the sac was removed and the ventricle wall repaired.

The patient's early course after the operation was complicated by fever and mental disorientation. After the third day, however, his recovery was uneventful and he was dismissed from the hospital, walking 18 days after operation.

In the four-and-a-half months since the operation he has continued to improve and is progressively increasing his physical activity. He has noted a "significant improvement" over his condition before the operation, the doctors said.

In an addendum to the report, the authors wrote that a 48-year-old man has also successfully undergone the operation.

The authors, in addition to Dr. Cooley, are Drs. Harold A. Collins, George C. Morris, Jr., and Don W. Chapman, all of the Cora and Webb Mading department of surgery, Baylor University College of Medicine, Houston.

Spinach Overrated as Iron Source—Spinach is no better a source of iron than many other foods.

In fact, potatoes, squash, and carrots contain more iron per portion than does spinach, according to Dr. William Bolton, Chicago.

He discussed spinach in his column, "That's a Good Question," in the May Today's Health, an American Medical Association publication. Dr. Bolton is associate editor of the magazine.

He noted that "some years ago spinach received a somewhat exaggerated rating" as an essential food. Now the pendulum has swung the other way.

Spinach contains moderate amounts of vitamin A, as do most green vegetables. It is also "a filling food," with a low calorie content, an important aspect for dieters. When properly cleaned, cooked, and served, it can be a tasty side dish, Dr. Bolton said.

Rare Fungus Disease Found in Florida—Two cases of a rare mole-like skin disease of the hand have occurred in Florida, according to three Florida scientists.

The disease, tinea nigra palmaris, is caused by a fungus and usually occurs on the palms.

Only five other cases of tinea nigra palmaris have been reported in the United States (one in Florida and four in Texas), the scientists said in the May 16 Journal of the American Medical Association. The disease usually occurs in South and Central America and the West Indies.

The occurrence of two more cases in widely separated parts of Florida suggests that the disease may be more common than generally thought, they said.

The lesions of tinea nigra palmaris are brown or black, appearing like an India ink or silver nitrate stain. They are neither elevated nor scaly as moles sometimes are. They cause no real discomfort and respond readily to treatment with agents, such as salicylic acid or benzoic acid, which cause a peeling of the horny layer of the skin.

The authors are Drs. J. Graham Smith Jr. and Wiley M. Sams, and Frank J. Roth Jr., Ph.D., Miami.

Mouth-to-Mouth Breathing Resuscitation Described—The mouth-to-mouth breathing technique of artificial respiration advocated for children was discussed in four articles in the May 17 Journal of the American Medical Association.

The technique, which has been adopted for use in children by the American Red Cross, has been found to be equally effective in adults, according to the articles.

Mouth-to-mouth breathing, sometimes called the "Biblical method," is the oldest known resuscitation technique. However, through the years manual techniques have been developed.

Now Dr. Archer S. Gordon and associates, University of Illinois College of Medicine, Chicago, have demonstrated through comparative experiments that the mouth-to-mouth technique is "unequivocally superior" to manual techniques in all age groups. It is the only one which assures that an adequate volume of air will enter the victim's lungs.

The other articles, all published under the auspices of the A. M. A. Council on Medical Physics, are by Dr. James O. Elam, Buffalo, N. Y., and associates; David B. Dill, Ph.D., Army Chemical Center, Edgewood, Md., and Dr. Peter Safar, Baltimore.



CARDIAC STIMULANT EFFECTS OF ADRENALIN

Instead of stimulating the heart as it ordinarily does, adrenalin has been found to depress the heart when used in combination with the heart tonic, digitalis, and body temperatures are lowered by hypothermia.

Surgeon Theodore Cooper and pharmacologist Marion Cotton of the Public Health Service's National Heart Institute at Bethesda, Maryland, have found that the cardiac stimulant effects of adrenalin and four of its close chemical relatives (nor-adrenalin, isoproterenol, ephedrine and phenylephrine) were either blocked or reversed by two digitalis compounds (ouabain and digoxin) in dogs whose body temperatures had been reduced 15 degrees below normal.

At normal body temperatures the cardiac stimulant effects of the adrenalin-like drugs were not affected by the digitalis, but as the temperatures of digitalis-treated animals were lowered, the effects of the adrenalin-like drugs were blocked, and at 86 degrees the drugs actually caused a measurable decrease in the force of heart muscle contractions.

Treating heart patients with digitalis heart tonics before lowering their body temperature for surgery has been shown to prevent the heart failure that is a major threat in heart operations using hypothermia. Consequently, treating the heart surgery candidate with digitalis drugs before operation has become a common safety practice in some clinics, as in the Heart Institute Clinic of Surgery. The adrenalin-like drugs, because they normally constrict arteries and raise blood pressure, are also commonly used in low blood pressure emergencies such as shock that sometimes develop during surgery.

The new findings, Dr. Cooper explains, have thus revealed a potential but avoidable hazard for the patient undergoing cardiac surgery under hypothermia.

Preliminary studies with methoxamine, a blood pressure-raising drug different in chemical structure from the five others studied, indicate that it is not blocked by the digitalis compounds. More research is needed to determine the performance of various drugs and combinations of drugs under conditions of hypothermia, Dr. Cooper said.

Editorials

INFECTION IN HOSPITALS

Measures to aid in reducing the current worldwide problem of infections in hospitals caused by antibiotic-resistant staphylococci have been recommended by the American Hospital Association.

The recommendations were included in a bulletin on "Prevention and Control of Staphylococcus Infections in Hospitals" mailed by the Association to the more than 7,000 hospitals in the United States and Canada. The bulletin was adopted by the Association's Board of Trustees at a May 13 meeting in Chicago.

"Information is inadequate as to the incidence of staphylococcus infections which are acquired in hospitals, but there is evidence that the number of such infections is increasing," the bulletin said.

"Infections with antibiotic-resistant staphylococci constitute the main difficulty. Hospitals are clearly the reservoir of most antibiotic-resistant strains," according to the bulletin. "One of the major factors in the current situation is the widespread use of antibiotics which eliminates susceptible strains of staphylococcus and leaves uncontrolled the resistant strains."

Examples of staphylococcus infections given in the bulletin included skin infections in newborn infants and children, in newly-delivered mothers, in burns, in incisions made during surgery, and in pneumonia in debilitated patients.

The bulletin recommended that "all hospitals should establish committees on infections to devote particular attention to infections which are acquired in hospitals so they may be reduced to the lowest possible minimum," and suggested that "the local health officer should be urged to serve as a consultant to the committee."

Recommended functions of the committee on infections should include:

1. Establishment of a system of reporting infections among patients and personnel.
2. Keeping of records of infections.
3. Distinguishing as far as possible between infections acquired in the hospital and infections acquired elsewhere.
4. Reviewing the hospital's bacteriologic service to insure its quality and accessibility.
5. Reviewing aseptic techniques used in operating rooms, delivery rooms and nurseries, and, if

necessary, recommending methods of improving these techniques.

6. Reducing "to the minimum consistent with adequate patient care" the "use of antibiotics, especially as 'prophylaxis' in clean elective surgery," and treatment with adrenocortical steroids.

7. Undertaking an educational program to convince medical staff and hospital employees of the importance of reporting skin infections, boils and upper respiratory infections.

8. Establishing follow-up techniques to find sources of infections and to locate infections acquired in the hospital which do not appear until after discharge.

The bulletin was prepared by the Association's Committee on Infections Within Hospitals. Members of the Committee are Dr. Dean A. Clark, chairman, general director, Massachusetts General Hospital, Boston; Dr. William A. Altemeier, professor of surgery, University of Cincinnati, Cincinnati General Hospital, Cincinnati; C. P. Cardwell, Jr., director, Medical College of Virginia, Richmond; Dr. James P. Dixon, Commissioner, Department of Public Health, City of Philadelphia; Dr. Maxwell Finland, Physician-in-Charge, Boston City Hospital, Boston; Dr. Horace L. Hodes, director, department of pediatrics, Mount Sinai Hospital, New York City; Dr. Alexander P. Langmuir, Chief, Epidemiology Branch, Communicable Disease Center, Atlanta; and Miss Martha Johnson, R. N., Assistant to the Director, Joint Commission on Accreditation of Hospitals, Chicago. Consultants to the Committee on the preparation of the bulletin were Dr. Kenneth B. Babcock, director, Joint Commission on Accreditation of Hospitals, Chicago; and Dr. William H. Stewart, Office of the Surgeon General, Public Health Service, Washington, D. C.

EXECUTIVES ARE GETTING THINNER OVERWEIGHT REDUCED THIRD IN 15 YEARS

Executives are getting thinner. In the last fifteen years, the number of overweight executives has been reduced a third.

This finding, the result of a study of 5,000 of the nation's executives by the Life Extension Examiners, has been disclosed by the Health Insurance Institute.

The Life Extension Examiners, in existence for some 40 years, is a national medical group concerned with preventive medicine by way of regular medical examinations. Dr. Harry Johnson, its medical director, said that the main reason for the change is that executives have been made to realize the importance of keeping their weight down as a part of total personal health. Business and industry-sponsored health programs, through regular health examinations, have focussed attention on this help-yourself phase of staying well.

"Overweight is the plague of the twentieth century," Dr. Johnson said, "and is the outstanding health hazard in America today. Too much fat destroys people as surely as disease and, although the process is long drawn out, is a certain killer."

"By keeping his weight down, the executive has made himself less vulnerable to such over-forty disablers as heart disease, diabetes, and high blood pressure."

"Today, only 15.2 per cent of executives are more than 10 per cent above normal weight, a big improvement over 15 years ago when 29 per cent of executives were too heavy. Under age 40, the percentage of overweight executives is 11.2."

According to health insurance statistics, approximately thirty million persons, or a fifth of the U. S. population, are overweight. Studies indicate that the average individual can expect his weight to increase from two to four pounds every five years up to age 60. A man of average height who weighs 150 pounds at age 29, can expect a weight increase of four pounds by the time he is 34. At 45, he can normally expect to weigh 160 pounds, and by 60, he probably will weigh 163 pounds. This is a gain of 13 pounds over 35 years, and does not represent overweight.

When does overweight become a disease? Only when weight exceeds by ten per cent the normal figure that has been set up for height and build, Dr. Johnson said.

"Keeping weight down is not a matter of dieting—or starvation," Dr. Johnson said. "It is rather a sensible approach to eating the proper foods in adequate amounts. Maintaining weight at the normal scale for height and age is a way of life, rather than a sudden spurt of activity aimed at 'reducing.' The individual who keeps his weight under control does not overeat one day and 'make it up the next' by starving himself."

Of the 5,000 executives examined for the study, 58.9 per cent, he said, were healthy "without evidence of significant organic disease. This is a high level of health that the general public does not surpass."

"Only 8.1 per cent were found to have high blood pressure, and 7.6 per cent, to have organic heart disease."

These figures, says Dr. Johnson, would seem to go counter to a popular impression that high-pressure executives are more ulcer prone than skilled laborers. Evidence would indicate, he said, that the responsibilities of executives do not automatically cause ulcers.

"Today's executive is on his way to healthier, happier living," Dr. Johnson declared.

The Health Insurance Institute is the central source of information for the nation's insurance companies serving the public through voluntary health insurance.

UTILIZATION OF HEALTH INSURANCE

Two out of every five American families who are protected against the cost of illness or accident have used their health insurance in the past year to defray medical expenses according to the Health Insurance Institute. A nation-wide consumer survey of health insurance just completed, the Institute said, also shows that seven out of ten families who have such insurance have used it at some time during the period their policies were in force.

The study, conducted for the Institute by an independent research organization, was undertaken to obtain information on what people know and think about health insurance, how they use it, and also how such factors as age, income, education and place of residence are related to health insurance coverage. The survey is the first of its kind to be undertaken on a nation-wide scale for insurance companies.

Results of the survey were announced at the annual meeting of the Health Insurance Association of America in Chicago by Albert I. Hermalin, Assistant Director, Division of Statistics and Research, Institute of Life Insurance, who served as consultant to the Health Insurance Institute on this project. Mr. Hermalin said the survey involved interviews with 2,000 families across the country, yielding information on more than 6,600 individuals.

On 53% of all claims, the survey reveals, families received payment on all or most of the medical bill, while in 20% of the cases payment was received for about three-quarters of the bill, and in 15% of the claims, one-half of the total expenses were paid.

Some 78% of the families using their health insurance expressed satisfaction with the service of the insuring organizations in paying benefits, according to the Institute survey, while 4% were dissatisfied and 18% had no definite opinion.

These figures, Mr. Hermalin pointed out, are consistent with the generally favorable attitude of the population toward health insurance which is revealed by the survey. Some 81% of the people interviewed expressed a favorable attitude toward the idea of having health insurance for themselves, while 9% were neutral in their comments and 8% were unfavorable. Of the insured families, 90% were favorable, and 55% of the families without coverage expressed a favorable attitude.

Mr. Hermalin pointed out that the pattern of attitudes on this question is almost identical for those covered by Blue Cross-Blue Shield organizations and families protected through insurance companies. Nor is there significant variation, added the speaker, in this attitude among different income groups, or among families covered through group insurance plans and those with individual

insurance policies.

Public acceptance of health insurance is also reflected in the survey results on suggested improvements in plans or services. Some 25% of the families had suggestions to make in this regard, 16% gave no answer, and 59% said they had no suggestions for improving health insurance plans or services.

Of the families with suggestions for improving services, 25% desired more information on health insurance, while 20% wanted more benefits in terms of dollars or number of days, and 14% suggested lower premium costs. The responses were found to vary little by type of insuring organization.

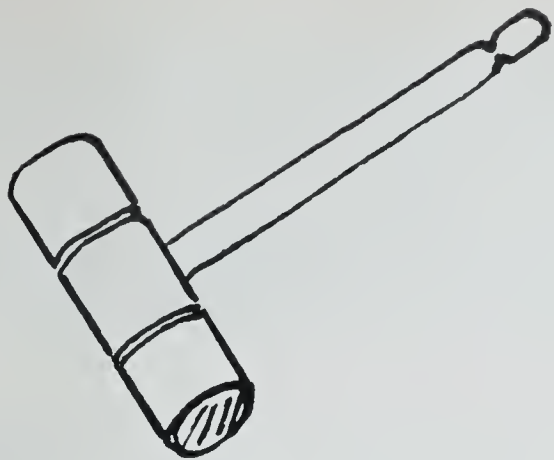
"It would seem to be significant," Mr. Hermalin stated, "that the most frequently made suggestion expressed a desire for more information rather than a concern about prices, benefits, services, cancellation, claim service and the like. It indicates again the generally favorable feeling people have toward health insurance."

Mr. Hermalin said the survey indicates that the public does not perceive any essential difference between the health insurance provided by insurance companies and that offered by Blue Cross-Blue Shield plans. This is suggested, he added, by the fact that families who have Blue Cross-Blue Shield coverage, and those with insurance company policies, "tend to regard health insurance in almost identical ways."

"This means," he explained, "that they are equally favorable toward health insurance, they have suggestions to make with about the same frequency, their suggestions are similar, they are equally informed about health insurance, and so on."

Turning to the extent of coverage, Mr. Hermalin reported that survey figures are consistent with previously published data showing that nearly three out of four American families have some form of health insurance. In 73% of all families, there is some health insurance coverage and in 60% of all families every family member is protected. In 27% of families, no one is insured, the survey points out. It further reveals that men, women and children are covered with virtually the same frequency, with 69% of the men insured, 67% of the women and 66% of children under eighteen so protected.

In the selection of families to be interviewed, the survey, conducted for the Health Insurance Institute by National Analysts Inc. of Philadelphia, followed a method similar to that used by the U. S. Bureau of the Census in its sample interview surveys. The Institute study required approximately eight months to complete, with each interview lasting about one and one-quarter hours.



President's Page

HOUSE CALLS

The young doctor remarked, with an air of superiority and the implication that it gave him a certain distinction, "I don't make house calls." After the first reaction of annoyance, a feeling of sadness for this young man crept over me. He was missing so much that was lovable; so much that was exciting; so much important experience that would make him a better doctor in later years. There is no situation where a doctor's services are more appreciated and more anxiously awaited than in the home. When a doctor enters a home he is sometimes acquainted with some of the most intimate details of the family life. The realization that this trust has been put in him and the responsibility to preserve the patient's confidence is one of the most ennobling influences in the practice of medicine. Most of the time the medical problem presented in a house call is not too difficult but not always. The doctor may find himself suddenly faced with a situation that calls on all of his knowledge of physiology, chemistry and anatomy. Being without the aid of an x-ray and laboratory he must rely on his skill in physical diagnosis and his knowledge until the other aids can be brought into play. His poise, resourcefulness and basic knowledge may be the difference between life and death for the patient.

There is no question that a patient can be examined more carefully and better in the doctor's office where he has the proper table, instruments and laboratory. In this day when there is a scarcity of doctors which, incidentally, seems to be increasing, it is wise to have patients to come to the office so that the doctor can see more patients during the working day. The public can be trained to accept this point of view and I believe it is generally being appreciated more. On the

other hand there will still be occasions when the patient must be seen in the home. An experienced doctor can sometimes appraise the situation in a telephone conversation and make suggestions that would tide the patient over until he can come to the office. In such instances the doctor is often left with a small germ of worry that he may have overlooked something. To be able to accept and shoulder this worry is one of the burdens that we acquire when we become members of this wonderful profession. One of the most trying patients is the one who regularly asks you to make a house call on your afternoon off. The psychiatrist no doubt could explain the peculiar mental twist that causes these people to do this. It takes the greatest self control to accept the fact that this mental aberration does exist and make the call gracefully. Occasionally it may be good therapy for this patient for the doctor to listen to his story over the phone to appraise the situation and if it does not seem urgent to state firmly that he cannot make the call at that time. Again the little germ of worry will creep into his mind.

Finally, I feel that we should realize that the house call, as troublesome as it may be, is an institution that fixes us more securely in the public esteem than any other, and the physician who refuses to make them even in emergency situations does us harm. This and other causes may lead us to some type of state controlled medicine.

Colman J. Furman



ORGANIZATION SECTION

PROGRAM OF THE ASSOCIATION

The program of the Association for the current year is under way. President Edgar G. Givhan called the second annual general planning meeting on Saturday and Sunday, May 24-25, and the same procedure was followed as in the first general planning meeting in August 1957.

The first day was devoted to work sessions in which the attendants were divided into three groups. Advisory Committee members sat with committee chairmen in their respective bureaus for discussion of reports on accomplishments during the past year and plans for the current year. Each bureau integrated plans of individual committees into a program for the bureau. On Sunday morning the three bureau programs were presented to the assembly and the proposed programs were welded into a definitely stated plan of action for the Association.

In addition to the committee chairmen and Advisory Committee members who are listed by bureaus, the following members attended the sessions and worked with the groups in formulating the program: Dr. Edgar G. Givhan, President; Dr. William R. Carter, President-Elect; Dr. William D. Anderson, Vice-President, Northwestern Division; Dr. E. L. Strandell, Vice-President, Southwestern Division, Dr. William E. White, Vice-President, Northeastern Division, Dr. Douglas L. Cannon, Secretary; Dr. E. V. Caldwell, Chairman, State Board of Censors; Dr. D. G. Gill, State Health Officer, and Dr. Frank L. Chenault.

BUREAU OF ADMINISTRATION

The work session of the Bureau of Administration was attended by Dr. J. P. Collier, Advisory Committee member; Dr. J. M. Weldon, Chairman, Committee on Constitution and By-Laws; Dr. J. O. Morgan, Chairman, Committee on Insurance; Dr. J. Garber Galbraith, Chairman, Committee on Medical Education and Hospitals; Dr. H. S. Bartlett, Chairman, Committee on Blue Cross-Blue Shield; Dr. E. M. Moore, Chairman, Committee on Program Evaluation; and Dr. L. L. Hill, Chairman, Building Committee.

Committee reports follow.

The Journal

It was reported that the financial position of *The Journal* is sound; that advertising space in-

creased approximately 58% in 1957, and that present indications are that the total amount of advertising space for 1958 will equal, if not exceed, space sold in 1957.

The format of *The Journal* has been changed and three new sections have been added: President's Page, Organization Section, and Medical Center News.

Membership contributions are needed for the Association Forum and plans are being made to work with committee chairmen in preparing articles on subjects which are related to their fields of endeavor. Suggestions are invited.

Dr. Cannon, Editor, called attention to the lack of sufficient scientific material and the situation which exists with regard to papers presented at annual sessions: too few annual session speakers present written papers for publication. It was suggested that tape recordings be made and the materials thus obtained be used for publication in *The Journal*. A recommendation was made that Dr. Givhan inform speakers who are invited to participate in the 1959 annual session that a tape recording would be made, stating that the speaker might prefer to bring a written paper for publication.

Committee on Constitution and By-Laws—Dr. J. M. Weldon, Chairman.

Dr. Weldon reported that there were no changes in the Constitution and By-Laws in the mill; that the committee therefore had no definite plans for the current year but would be ready to consider any proposed changes which might be submitted to it.

It was recommended that a revised edition of the Constitution and By-Laws be printed, either with the roster of the Association or separately, and put into the hands of each new member when he joins.

Committee on Insurance—Dr. J. O. Morgan, Chairman.

Report of the Chairman: "Proposed Program—1. Standardized Insurance Report Forms. The committee will work with the Health Insurance Council in an effort to get all insurance companies operating in Alabama to adopt the six standardized forms which were approved at the last meeting of our Association.

ORGANIZATION SECTION

"2. Medical Association Group Liability, Accident and Health Plans.

"It is realized that for these plans to operate at their maximum efficiency it is necessary that the enrollment in both of the plans be increased. Liberty Mutual is now preparing material for a direct mailing campaign to the membership of the Association.

"Through Mr. Dozier's office and the secretaries of the County Medical Societies we shall attempt to get literature and application blanks into the hands of all newly licensed physicians and new Association members.

"An effort will be made to activate our county insurance committees. Through these committees we hope not only to increase the enrollment in our insurance plans but also to minimize malpractice suits. Literature is being prepared for the guidance of these committees."

*Committee on Medical Education and Hospitals—*Dr. J. Garber Galbraith, Chairman.

Report of the Chairman: "Program 1958-59:

"1. Continue Calendar of Events section in Journal of M. A. S. A.

a. Scheduled activities in Medical Center;

b. Sectional meetings elsewhere in state sponsored by local chapters of various national organizations.

"2. Promote Medical Education Week and Cancer Week.

a. Work with lay groups interested in these projects;

b. Sponsor open house in community hospitals;

c. Suggest County Medical Societies provide speakers to senior classes of local high schools and colleges on careers in medicine;

d. Provide appropriate literature to interested parties.

"3. Work with A. M. E. F. Committee to enlist wider voluntary support of medical education by medical profession and industry.

"4. Have physicians take interested prospective medical students to hospitals for view of activities there."

On Sunday morning it was reported that county societies in the southwestern section of the state have been sponsoring student exhibits at science fairs and that the projects had proven highly successful. Dr. Carlton W. Winsor, Mobile, and Dr. J. Michaelson, Foley, recommended that this practice be made statewide, awarding ribbons for first-, second- and third-place winners. Dr. Collier stated that the recommendation would be referred to Dr. Galbraith.

Committee on A. M. E. F.—Mr. Dozier reporting for Dr. H. G. Hodo, Jr., Chairman.

"A. M. E. F. contributions from May 5 and May 16 letters:

Total contributions—\$3,070.00.

Total contributors—327.

Majority were \$5.00 donations."

Committee on Blue Cross-Blue Shield—Dr. H. S. Bartlett, Chairman.

Report of the Chairman: "Your Committee on Blue Cross-Blue Shield feels that during the coming year the resolution introduced in the State Association by Dr. Wood Herren of Birmingham should form a basis for work for this committee. Each of the organizations which endorsed the resolution has been asked to appoint a member to a consulting committee with which this committee will work. Each member of the consulting committee will be asked to furnish this committee with a schedule of non-surgical benefits with which his group would be satisfied. When these suggestions are obtained, a joint meeting of the advisory committee and this committee will be held, at which the recommendations will be studied and an attempt made to formulate a fee basis for non-surgical insurance. Following this, the members of your Blue Cross-Blue Shield Committee will endeavor to bring this before the Board of Blue Cross-Blue Shield and have a policy made available to the public incorporating the suggestions that have been made.

"A continued effort will be made to compare Blue Shield benefits nationally with Blue Shield benefits in Alabama and the surrounding states.

"Continued efforts will be made to improve Blue Shield and doctor relationship in the state."

Committee on A. M. A. Program Evaluation—Dr. E. M. Moore, Chairman.

Report of the Chairman: "This is a new committee, having been in existence for only one year. It was instituted to study proposed programs and activities which from time to time are recommended by the American Medical Association. This committee has met on two former occasions during the year to study and evaluate programs which were referred for the committee's consideration. In considering such programs, the committee has tried to evaluate their importance to public good, their importance to organized medicine, and their applicability to Alabama.

"The first program referred for evaluation by the committee was that regarding Old Age and Survivors Insurance. The committee first considered the recommendations from the A. M. A. that the State Association set up a special committee at the state level to work with the Old Age and

Survivors Insurance District Office.

a. The federal program is now in operation and is guided by legislation provided in Public Law 880.

b. The responsible federal administrative agency is the Bureau of Old Age and Survivors Insurance (B. O. A. S. I.) in the Department of Health, Education and Welfare. They have over 550 district offices for Old Age and Survivors Insurance scattered over the U. S. at present, and these are responsible for the initial development of information on which determinations of disability under Public Law 880 are made.

c. These federal district offices cooperate with local state agencies which are designated to make such determinations of disability. In 43 states the local state agency as designated is the State Vocational Rehabilitation Agency.

"The importance of a state committee is stressed by the A. M. A. It suggests the objectives and activities of such state committees should be principally concerned with,

a. The promotion of mutual understanding and effective relationships between local administrative agencies and the medical profession;

b. The provision of technical advice and consultation regarding medical aspects of local administration of Public Law 880;

c. The development of educational material for publication in state medical association journals and bulletins and distribution to individual physicians.

"Our committee recommended to the State Medical Association that a special committee be set up, 'Medical Committee on Old Age and Survivors Insurance.' We further recommended that this committee be composed of 10 men, possibly at least one from each congressional district, so that this committee could have representation from all over the state and thereby better understand the problems in various localities. This would enable the committee to carry out better its primary function of promotion of mutual understanding and effective relationships between the local administrative agencies and the medical profession.

"Our committee next considered the A. M. A. recommendation that the State Association set up 'A Committee on Aging.'

a. Geriatrics is a relatively young specialty, as such, but is rapidly developing.

b. Not only are the physicians concerned about scientific studies in gerontology but also a great amount of study and interest is shown by sociologists, psychologists, social service workers and political leaders.

c. The aim is not merely to prolong man's life span, but to keep him active.

d. This deals with housing, nutrition, recreation and retirement.

"Our committee recommended that the State Association create a five-man Committee on Aging.

"Our committee then discussed the matter of orienting the new committees when they were formed. It was suggested that our committee should meet with the newly formed committees at their first meeting so that the new committee members could be properly oriented in the background which indicated setting up such a committee.

"The purpose of our committee, as we understand it, is to study and evaluate any of the A. M. A. programs referred to us for consideration; then to make recommendations regarding our findings and give reasons for these recommendations."

Building Committee—Dr. L. L. Hill, Chairman.

It was reported that the lot for the Association building had been acquired; that the buildings which presently stand on the property were being demolished; that an architect had been employed, and that preliminary plans had been submitted. Plans for the current year contemplate construction of the building.

BUREAU OF MEDICAL SERVICE

In the Bureau of Medical Service work session were Dr. John W. Simpson, Advisory Committee member; Dr. J. H. French, Chairman, Committee on Maternal and Child Health; Dr. Paul Nickerson, Chairman, Committee on Rural Health; Dr. C. W. Winsor, Chairman, Disaster Committee; Dr. R. C. Berson, Chairman, Committee on Indigent Care; Dr. Frank Kay, Chairman, Committee on Mental Hygiene; Dr. W. J. Tally, Chairman, Committee on Tuberculosis and Chronic Pulmonary Diseases, and Dr. J. J. Kirschenfeld, Chairman, Committee on Aging. The committee chairmen reported as follows:

Committee on Maternal and Child Health—Dr. J. H. French, Chairman.

Report of the Chairman: "The committee recommends that the study of maternal deaths continue, particularly to collaborate vital statistics in case finding efforts better. Doctors should be urged to be more accurate in their filing of these reports with the State Health Department.

"Last year's committee suggested that determination of the Rh factor should be compulsory in each case of childbirth. This matter has been referred to the Hospital Association for action.

"It is hoped that the continued study of premature births will be made."

ORGANIZATION SECTION

Committee on Rural Health—Dr. Paul Nickerson, Chairman.

Report of the Chairman: "The prime purpose of this committee this year is to establish in each county a County Rural Health Committee.

"Program suggested:

Educational:

1. Health education by Home Demonstration Clubs as outlined by the medical profession. Distribution of personal health records; and encouragement of all members to have their personal physicians.

2. Studies to be made on which problems are most urgent, for example, use of mobile x-ray unit in rural areas for tuberculosis survey.

3. Stimulate interest in rural health by rural people themselves.

Concrete:

1. Institute drive for polio vaccination.

2. Preschool immunization.

3. Sanitation—as rat eradication and inspection of water supplies.

4. Annual physical examinations for all persons in these farm groups.

"The above programs have been put into being and much work already has been done."

Disaster Committee—Dr. Carlton Winsor, Chairman.

Report of the Chairman: "Last year your Civil Defense-Disaster Committee agreed that initial planning and organization should begin at the County Medical Society level and should be geared to meet natural disasters which might be presumed to affect any given locality.

"In summary, we deem it advisable to initiate disaster planning at the county level. With concurrence of the full committee, we will mail specific plans, including tables of organization, to each county society to use as a guide in formulating its own code of procedure and request each society to designate a Disaster Director immediately. In order to provide a working organization, this committee must also initiate proper steps to determine the names of the best available divisional disaster directors for each of the four state divisions and to submit the same to the State Board of Censors for appointment. As soon as a State Director of Disaster Services can be appointed, he will assume active overall direction of disaster planning and this committee will thereafter serve as his advisory council.

"This committee is to be on hand in case the federal government comes in to orientate on defense procedures."

Committee on Indigent Care—Dr. R. C. Berson, Chairman.

Report of the Chairman: "The important work of this committee is to evaluate as rapidly as possible the program set forth in the last session of the Legislature. The hopes are that the statewide indigent care plan will be so sound that it will be expanded. It is recommended that a careful study be made of the possibilities of securing the federal matching funds for the indigent medical care. This study should be made in cooperation with the Association's Legislative Committee."

Committee on Mental Hygiene—Dr. Frank Kay, Chairman.

Report of the Chairman: "The committee has concerned itself with:

1. The clinical psychologists and their request for certification.

2. Psychiatric benefits by Blue Cross-Blue Shield.

"The committee recommends:

1. (a) It would be a delicate situation for this committee to presume to direct its efforts in securing the psychologists' certification. This is more properly a matter of their own decision.

(b) It has been proposed to amend the Medical Practice Act to the effect that psychotherapy, as indicated in a recent resolution, approved by the American Medical Association and the American Psychiatric Association, is a medical procedure.

2. Recommend Blue Cross-Blue Shield carry coverage for psychiatric treatment."

Committee on Tuberculosis and Chronic Pulmonary Diseases—Dr. W. J. Tally, Chairman.

Report of the Chairman: "The committee would wish to underline, emphasize, and in every possible way bring before the members of the Association again the continued need for isolation in the proper care of tuberculosis which remains an infectious disease in spite of all changes in thinking and procedure with respect to its diagnosis and treatment.

"The committee would also wish to bring before the Association the opinion of the committee that hospitalization for the care of newly discovered cases of tuberculosis is, because of the need of isolation, still a problem of vast importance and of paramount urgency.

"Taking into account the importance, in fact the imperative need, of isolation, and the increasing availability of hospital beds for the care of cases of tuberculosis, this committee again points out to the Association that the majority of our surrounding states have on their statute books laws demanding the hospitalization of cases of tuberculosis which are infectious and which are

not otherwise being properly cared for. It is admittedly true that no serious study of these laws has been made by the committee and it feels unable to make specific recommendations as to the advisability of the various sorts of statutory provisions that can be used. The committee has arrived at the point at which it wishes to emphasize its previous recommendation that very serious study of the relative merit of various laws be given careful consideration and that the Association actively support and encourage the enactment of such legislation in Alabama as soon as the number of beds available for the treatment of tuberculosis is sufficient to insure prompt admission of cases admitted through legal steps. The intent of the legislation referred to is to deal with the problem of the recalcitrant patient.

"It seems eminently proper to point out the opinion of the members of this committee that chemotherapy of tuberculosis in Alabama is seriously and materially handicapped as result of the lack of availability of sensitivity testing to determine the optimum combinations of drugs to be used in the treatment of any individual cases of tuberculosis. This relatively simple procedure has long been made use of by others in the direction of chemotherapy and it seems overdue to be employed by those physicians treating tuberculosis in Alabama. It would seem imperative that each tuberculosis sanatorium be in a position to carry out sensitivity tests within its own laboratory facility and it would seem desirable that the State Health Department provide this service through its laboratory division for other physicians practicing within the state.

"The committee wishes also to make use of this opportunity to direct the attention of the members of the Association again to the hazardous and potentially fatal results that can come about through the inadvised and promiscuous use of steroid therapy in patients who could possibly have unstable tuberculosis; either active at the time of administration of steroid therapy, or capable of easy activation. In general, to be entirely safe, it would seem that steroid therapy should be considered inadvisable unless under the careful supervision of one well versed in the use of antituberculous chemotherapy in all individuals in whom the tuberculin test is found to be positive, and that steroid therapy should be withheld from such individuals until such time as proper coverage with effective antituberculous chemotherapy can be instituted.

With reference to non-tuberculous pulmonary disease the committee would wish to point out that many physicians in Alabama fail to diagnose and treat bronchiectasis and that further study of such cases is urgently needed in order to bring about properly the therapy which can benefit them.

Moreover, byssinosis is a disease of the pulmonary structures which is quite prevalent in this state due to the existence of a large textile industry. This disease is also often unrecognized and probably mistaken for bronchitis, bronchiectasis and similar disturbances. Better teaching and improved methods of detection and treatment pertaining to this disease need to be encouraged. Pneumoconioses in the industries of Alabama are undoubtedly a problem of continuing importance. Also it is pointed out that chronic obstructive pulmonary disease, probably representing emphysema in most cases, is related with a 1 to 1 ratio to smoking. This disease is far higher in prevalence than carcinoma. It is extremely disabling and, if neglected, most difficult to treat in its advanced stages. In incipient form, however, it can often be satisfactorily dealt with, particularly if abandonment of the smoking habit can be procured.

"The committee recommends reorganization of the film interpretation and follow-up care under the supervision of the Medical Director of the tuberculosis sanatoria in each district."

During the discussion on Sunday morning, Dr. Givhan stated that he would like to add one additional activity for the committee. He stated that Jefferson County has adequate facilities and soon they will be too much. He recommended that the committee review the sanatorium facilities over the state and look forward to the time when some of the beds might be converted to use for old people or others.

Dr. Simpson commented on the need, particularly in Mobile, for setting up outpatient facilities. *Committee on Aging*—Dr. J. J. Kirschenfeld, Chairman.

Report of the Chairman: "This committee was instituted at the last meeting of the State Association. Time will be needed for the committee to orient itself to the various aspects of this problem. It will devote itself to the study of:

1. The size of the aged population in Alabama.
2. Possible facilities for meeting its medical problems.
3. Possible recommendations for increased improvement of this medical care.
4. The committee desires to cooperate with other agencies involved in the problems of the aged."

BUREAU OF PUBLIC RELATIONS

Meeting to construct the program of the Bureau of Public Relations were Dr. E. L. Strandell, substituting for Dr. J. O. Finney, Advisory Committee member; Dr. J. Michaelson, Chairman, Committee on Public Relations; Dr. M. Vaun Adams, Chairman, Committee on Legislation; and Dr. O. Emfinger, Chairman, Committee on Veterans Affairs. The report of this bureau follows:

Proposed Plans of the Public Relations Committee

A. Current Projects

1. Physicians Placement Service—Community rating survey—Dr. Richard Rutland
2. Speakers Bureau
3. Course for Medical Assistants
4. T. V. Spot Films
5. Emergency Call Systems
6. Fair Exhibits
7. Distribution of Key Booklets
 - (1) "Your Family Health Records"
 - (2) "To All My Patients"
 - (3) "What Everyone Should Know About Their Doctor"
8. William Crawford Gorgas Award
9. Liaison Committees with Bar, Dental, and Pharmaceutical Associations
 - (1) Fraternal Delegates
10. Public Safety Programs
11. Pamphlets
 - (1) Burns
 - (2) Cuts
 - (3) Accidental Poisoning
 - (4) Nose Bleeding
12. Public Relations Institute
13. Indoctrination Course for New Members
14. Annual Essay Contest—Woman's Auxiliary
15. P. R. Notes—being sent to Auxiliary
16. Symposium on the Prevention and Treatment of Athletic Injuries

B. Proposed New Projects

1. Annual award to newspaper reporter for best medical news story of the year.

C. Requests for Suggestions for New Projects

Committee on Public Relations—Dr. J. Michaelson, Chairman.

In the temporary absence of Dr. Michaelson, Mr. William V. Wallace, Executive Assistant, made the following report:

Physician Placement Service: Several months ago the committee approved a community rating survey for the purpose of evaluating all communities that were listed with the Placement Service as seeking doctors. On April 30th the survey began and has at this date been completed with the exception of two communities. On the survey committee were Dr. R. O. Rutland, Dr. J. Michaelson and Mr. Wallace.

Through such a program, the committee discovered that at least five towns which were listed as seeking doctors had adequate medical care or had obtained a doctor without the knowledge of

the Placement Service. Other towns had constructed clinics and some had been better equipped to make their town more attractive to a doctor. A total of about 35 communities have thus far been visited and evaluated and the final results will be presented to all doctors who are listed with the Placement Service as seeking a location. There were only eight communities which were found to have "A" rating; others were listed as "B" and "C" towns. Practically all communities threw out the welcome mat for the committee, some giving dinners and luncheons, others closing up stores and schools in order to have a good representation at the meeting. The survey committee feels that public relations of Alabama doctors has been enhanced to an inestimable degree as a direct result of this gesture. In the future, as other towns are listed with the Placement Service as needing a doctor, the survey committee will visit the communities to evaluate their needs and also to protect the interests of doctors seeking to locate. The information obtained will be evaluated and given to all physicians for their use in determining whether or not they will be interested in going into these towns to practice.

Speakers Bureau: During the past several months a mass mailing was made to clubs throughout Alabama. From this mailing we have had over 30 requests for speakers to various clubs and groups. There are quite a number of speeches that are being made locally, of which the Speakers Bureau has no knowledge other than those reports volunteered to various members. Our doctors are giving their wholehearted support to this program and it is continuing to be a means of greatly enhancing the public relations effort on the part of the profession.

Mass Media: The TV spots that have been prepared by the University of Alabama have not met with the full approval of the committee and another source of obtaining such spots was discussed. The problem will be worked out at a later date.

Fair Exhibits: In 1957 the Association had an exhibit at Birmingham, Montgomery and Mobile. This exhibit used two scales, and approximately 9,000 people were weighed during the three fairs. Pamphlets were distributed entitled "When You Diet," "I Asked My Doctor How to Lose Weight," and "M. A. S. A." Fair exhibits will be continued in 1958.

Interprofessional Relations: The Association owes a tremendous debt of gratitude to Dr. J. G. Daves for the magnificent work he has done in establishing functioning liaison committees with the Bar Association, the Dental Association, and the Pharmaceutical Association and for having held meetings with each of these groups. The committee feels that a closer bond now exists between

these groups and the medical profession in Alabama as the result of the personal efforts of Dr. Daves and his committee members. At the meeting with the Alabama State Bar Association an "Interprofessional Statement of Principles for Attorneys and Physicians in Alabama" was formulated and presented as a part of the committee's report for the year.

Public Relations Institute: An institute will be held in Alabama as soon as plans can be worked out how to best approach this phase.

Emergency Call System: A survey is anticipated in the near future to determine to what extent this program is used. This will probably center on hospitals.

Public Safety Program: The committee has endorsed a long range public safety program directed toward the prevention of accidents on the highway as well as in the home and on the farm. Four leaflets entitled, "Burns," "Cuts," "Accidental Poisoning," and "Nose Bleeding," have been printed, and 160,000 copies have been distributed on requests from the doctors. A resolution was drawn and presented to the State Highway Department for its use in preventing highway accidents.

Indoctrination Course: The indoctrination course for new members which was held during the annual session this year was well attended. There were about 25 new members, as well as the officers of the Association, who attended. This feature will be continued at subsequent annual sessions. The question of whether or not this course should be held on a compulsory or a voluntary basis was brought up. It was felt that compulsion would not work with this group but that a little more planning, a separate meeting with more time for the session, perhaps several hours in which to give a complete insight into the mechanics of the Association, would make this a very effective course for new members.

Essay Contest: The essay contest is being conducted by the Woman's Auxiliary again this year and it is to be commended on the fine work it is doing in this respect.

Medical Assistants Courses: These courses have been established in 8 cities of Alabama: Montgomery, Mobile, Gadsden, Birmingham, Huntsville, Selma, Tuscaloosa and Florence. The courses met with such great response that it was suggested they be continued next year in the University of Alabama centers. It was suggested that, instead of having the courses ten consecutive weeks, they be one night each month throughout the year. This would be far easier on the coordinators and probably would give more time for planning and working out the details of the classes. Some suggestions were made concerning the mental level of the

courses and it was thought that they were far too elementary in scope.

The William Crawford Gorgas Award will be continued each year. Rules and regulations governing the award have been drawn up and have been approved by the Association.

The Alabama Association of Medical Assistants and the Myasthenia Gravis Foundation have been seeking recognition by the Medical Association. The committee has recommended to the State Board of Censors that the first named organization be recognized; but they referred the Myasthenia Gravis Foundation to the State Board of Censors with a request that it formulate a statement of policy regarding this and all like fund raising organizations.

Proposed Programs: Conference on Athletic Injuries—this program is taking hold in the upper part of the state. The committee informed Mr. Cliff Harper of the Alabama High School Athletic Association that it was interested in the conferences. It feels that, in the initial endeavor, a panel discussion composed of about four doctors would suffice; they would discuss such things as the importance of a physical examination, what coaches can do in the prevention of injuries, handling injuries in the field, admitting the injured athlete back to practice, and the use of any type drug by the athlete, etc. It was also suggested that the Association print leaflets to be distributed to all physicians in the state, to all coaches, all high school principals; and to be handed out at conferences. It is the firm belief of the committee that an annual conference of this type on athletic injuries should be held in the state to prepare all concerned better relative to the treating of such injuries.

Press Award—The committee will make further plans to present a press award this year. This will be some type of award to be made to a medical reporter. The question was posed for our thoughts on "just what is a medical reporter?" No definite plan was proposed but this will be given more thought at the next meeting of the committee.

Committee on Legislation—Dr. M. Vaun Adams, Chairman.

Report of the Chairman: "This committee, the first of its kind in the Association, was appointed by the President, Dr. John A. Martin, in May 1957. The work of the committee since that time has been concerned with organizing the work and making recommendations on bills which have been introduced in the Legislature. The committee has concerned itself only with that legislation which affected the medical profession, the State Department of Health, and other groups proposing to practice the healing arts. Reports were made on these bills and the committee will continue to

consider all other bills relative to public health, prior to their being brought into the State Legislature.

"The chairman will call a meeting of the committee shortly in order to consider the various aspects of these bills and to formulate some positive plans. The advantage of this program is that the legislators will not come to Montgomery ignorant of our program. It was suggested that authority be given the Committee on Legislation to speak for the Association on any legislation that does not affect the integral laws of the Association. This was approved.

"At the annual session of 1957 it was deemed necessary to appoint special committees to continue the study of the various proposals which had been considered, and in July 1957 a selected group of interested persons was appointed to work on the naturopathic, physical therapy, psychology, chiropractic and coroners system subcommittees. At the planning meeting held on August 4, 1957 the committee outlined an extensive program, with the following report summing up the points of this program:

"*Resolved:* That the Medical Association of the State of Alabama, through its Committee on Legislation, offer a positive legislative program, which would be in the best interests of the State Medical Association. It should also offer leadership in the legislative field which affects the public health of the citizens of Alabama;

"That the Committee publish a booklet incorporating the Medical Practice Act, the Public Health Laws of Alabama, and any other laws which affect, directly or indirectly, the Medical Association of the State of Alabama, to be distributed to all doctors and to be given at indoctrination courses;

"That the Committee hold a yearly joint meeting with the legislative contact men from each County Medical Society, so the duties, responsibilities and obligations of each group may be more clearly defined. This would undoubtedly stimulate interest in the legislative problems confronting the Association;

"That the Committee request an appropriation from the Board of Censors to be used for acquiring legal counsel and guidance in the Association's proposed legislation;

"That this Committee publish, under the organization section of the *Journal*, the Legislative Committee reports on the various bills studied, if, in the estimate of the chairman, the executive secretary and the editor of the *Journal*, it would be in the best interest of the Association.

"On the Forand type legislation, it was decided that as long as no committee hearings were now

being held, no action would be taken at the present time other than the previous action taken by the Committee on Legislation as reported in the Supplementary Report given at the annual session."

Committee on Veterans Affairs—Dr. O. Emfinger, Chairman.

Report of the Chairman: "The objectives of the committee are to inform the members of the Medical Association as to the type of Veterans Administration medical care in Alabama and to endeavor to prevent encroachment of Veterans Administration medical care on private medical practice by means of better information dissemination to physicians and the general public and by insisting that our senators and congressmen in Washington use every means available to them to have the Veterans Administration medical care program limit its activities to care of service connected disabilities and absolutely indigent non-service connected cases.

"Proposed program for the year:

1. Have the book "Policy on Medical Care of Veterans" sent to every physician in Alabama.

2. Have the Federal Medical Service Newsletter sent to all physicians in Alabama. (If expense is too great for these two items to be paid by the Association, then have them sent on request basis paid for by the individual physicians.)

3. Ascertain and inform the members of the State Association as to the statistics regarding (a) number of veterans in Alabama, (b) number treated in Veterans Administration hospitals, (c) type of disease—acute, chronic, etc., (d) average hospital stay for various types of diseases, (e) number that were admitted but had some type of hospital insurance or were covered by Workmen's Compensation, (f) amount of money involved in (e)."

New Report on Indigent Care—A new report titled "Medical Care for the Indigent in 1957" has been prepared by the Committee on Indigent Care of the AMA's Council on Medical Service. This report deals with some of the specific problems that states have encountered under current laws. Two previous reports in the series have dealt with the development of public assistance medical care and the changes made by 1956 and 1957 amendments to the program.

Effective July 1, 1957 new federal matching funds were authorized to reimburse the states for part of the cost of providing medical services to recipients of old age, blind, and permanent and total disability assistance, and of aid to dependent children. However, these additional funds could be applied only to payments made directly to the providers of medical services—physicians, hospitals, pharmacists, etc. States applying for these funds could receive federal aid, outside the limits set by this new formula, only for payments made directly to assistance recipients.



MEDICAL CENTER NEWS

DR. HARRISON HONORED BY DOCTORS AT SPECIAL TESTIMONIAL DINNER

A group of distinguished and devoted physicians gathered in the Rutland Room of the Haddon Hall Hotel in Atlantic City, New Jersey, on Monday evening, May 5, to pay tribute to their friend, teacher and colleague, Dr. Tinsley R. Harrison.

This function, which was a total surprise to Dr. Harrison, was conceived and formulated by Dr. Robert H. Williams, who is Chairman of the Department of Internal Medicine at the University of Washington School of Medicine, Seattle, Washington.

Mrs. Harrison, as well as three of the Harrison children, Mrs. Ike Smith, III, of Red Bank, New Jersey, Mrs. Thomas McGrath, of Falls Church, Virginia, and Dr. T. Randolph Harrison, Jr., of Randolph Air Force Base, Texas, attended the banquet. Miss Minnie Mae Tims, who has worked with Dr. Harrison for the past 31 years as a technologist, secretary, editorial assistant and major domo, participated in this function.



Dr. Tinsley Randolph Harrison A beautifully bound red leather volume containing personal letters to Dr. Harrison from former students, residents, research fellows, and associates was presented to Dr. Harrison. Following this presentation, an illustrious array of speakers spoke of the life and accomplishments of Dr. Harrison. Dr. Alfred Blalock recounted many pleasant episodes experienced by him and Dr. Harrison when they were fellow students at the Johns Hopkins Medical School.

Dr. Chester Keefer, of Boston, recounted his pleasant and informative association with Dr. Harrison as a fellow resident when they were at the Peter Bent Brigham Hospital in Boston. Dr. Sam Levine of Harvard told many exciting tales of Dr. Harrison as a pupil. Dr. William Dock of New York presented in his usual excellent fashion his own admiring concepts of Dr. Harrison as a cardiologist. Dr. William Resnik of Connecticut re-

counted some experiences of Dr. Harrison as the author. Speaking of Dr. Harrison as a teacher from the point of view of a student and house officer was Dr. Joseph Crampton of Seattle, Washington.

Dr. Louis Tobian of Southwestern Medical School, Dallas, Texas, recounted his stimulating experiences with Dr. Harrison as a research fellow. Dr. C. Sidney Burwell, of Harvard Medical School, and Dr. Hugh Morgan, Professor and Chairman of the Department of Medicine at Vanderbilt University School of Medicine, Nashville, Tennessee, spoke of Dr. Harrison as a staff teammate. Finally, Dr. Robert C. Berson, Vice-President of the University of Alabama and Dean of the Medical College of Alabama, recounted the growth of the Department of Medicine of the Medical College of Alabama during Dr. Harrison's tenure as Chairman of the Department.

A *festschrift* is to be published in approximately two years in one of the national journals, this journal being devoted entirely to papers written by previous students, residents, and colleagues of Dr. Harrison's. In addition the Tinsley Randolph Harrison Lectureship was announced by Dr. Williams. This Lectureship is to occur annually each fall at the University of Alabama Medical Center in Birmingham, Alabama.

In addition to the above well-known figures in medicine attending the banquet were Dr. Paul Dudley White of Boston, Dr. George Thorn of Boston, Dr. Paul Beeson of Yale, Dr. Eugene Stead of Duke University School of Medicine, Dr. Maxwell M. Wintrobe of Salt Lake City, and Dr. John McMichael of London, England.

This program for honoring a great and distinguished physician, teacher, investigator and friend, Dr. Tinsley Randolph Harrison, was thoroughly enjoyed and appreciated by all who were fortunate enough to be in attendance.

INTERN APPOINTMENTS ANNOUNCED FOR GRADUATING MEDICAL CLASS

Intern appointments have been announced for members of the medical class who graduated on June 1.

Appointments were made to hospitals throughout the nation.

A list of students and their announced intern affiliation follows:



HONORING DR. HARRISON—The above photo was taken during the testimonial banquet honoring Dr. Tinsley R. Harrison in Atlantic City, New Jersey. From left to right are: Mrs. Tinsley R. Harrison, Dr. William Dock, Dr. Samuel Levine, and Dr. Tinsley R. Harrison.

In Birmingham hospitals—Curtis L. Adams, Jerry W. Bains; Janice Cailleteau, Wiley H. Cooper, Alan R. Dimick, Thomas L. Kilgore, Doye L. McCall, Jr., Andrew H. McElroy, Jr., L. C. Parnell, Jr., University Hospital and Hillman Clinic.

George L. Andrews, William H. Brakefield, Donald W. Brice, Paul R. Moffett, Jr., Bennie N. Moore, Jerry Nelson, William M. Shipman, Theodore R. Whatley, St. Vincents Hospital.

Edward H. Austin, Hope W. Brooks, Charles M. Buckner, Jr., James P. Collier, Arthur L. Ennis, Harrison M. Goodall, Robert M. Gray, John M. Jackson, Emma E. Maddox, Glenn H. Montgomery, James E. Ramsey, Samuel C. Stephens, Jr., James O. Williams, Lloyd Noland Hospital.

In Mobile hospitals—John M. Ashurst, Jr., John L. Davis, III, Thomas R. Lumpkin, Edward H. Reagor, Jr., Clarence D. Whigham, Mobile County Hospital.

In Atlanta hospitals—John A. Crook, Jr., James C. Wells, Grady Memorial Hospital.

In Boston, Mass. hospitals—John L. Jeffries, II & IV Med Harvard, Boston City Hospital; Donald C. Harrison, Peter Bent Brigham Hospital.

In Chapel Hill, N. C.—Edward J. Green, North Carolina Memorial Hospital.

In Cincinnati, Ill. hospitals—John C. Gallagher,

Cincinnati General Hospital.

In Dallas, Tex. hospitals—Oliver C. Baker, Foy E. Blue, Neil E. Christopher, Parkland Hospital.

In Denver, Colo. hospitals—Robert R. Smith, Denver General Hospital.

In Durham, N. C. hospitals—Jack W. Trigg, Jr., Duke Hospital.

In Galveston, Tex. hospitals—Benny R. Cleveland, University of Texas Medical Branch Hospital.

In Greenville, S. C. hospitals—Joseph B. Ray, Greenville General Hospital.

In Houston, Tex. hospitals—Wayne C. Liles, Jefferson Davis Hospital.

In Jackson, Miss. hospitals—John R. Montgomery, George R. Walker, Jr., Lloyd C. Warr, Jr., University Hospital.

In Macon, Ga. hospitals—Braxton F. Smith, Macon County Hospital.

In Madison, Wis. hospitals—Margaret J. Seay, University Hospitals.

In Minneapolis, Minn. hospitals—Edward T. Peter, University Minnesota Hospital.

In Nashville, Tenn. hospitals—James C. Doyle, Raymond E. Gilmer, Jr., John L. Swan, St. Thomas Hospital.

In New York, N. Y. hospitals—Carl J. Bentzel, The Presbyterian Hospital.

In Orlando, Fla. hospitals—John H. Prine, Orange Memorial Hospital.

In Richmond, Va. hospitals—Helen W. Hallman, Medical College of Virginia.

In Tampa, Fla. hospitals—Charles A. Mixson, Tampa General Hospital.

In Winston-Salem, N. C. hospitals—Robert C. Garrison, Jr., City Memorial Hospital.

In Army Medical Service Hospitals—William R. Marshall, U. S. Army Hospital, Fort Bragg, North Carolina; Robert S. Pearson, William Beaumont Hospital, El Paso, Texas.

In Naval Hospitals—Robert B. Mitchell, U. S. Naval Hospital, Jacksonville, Florida.



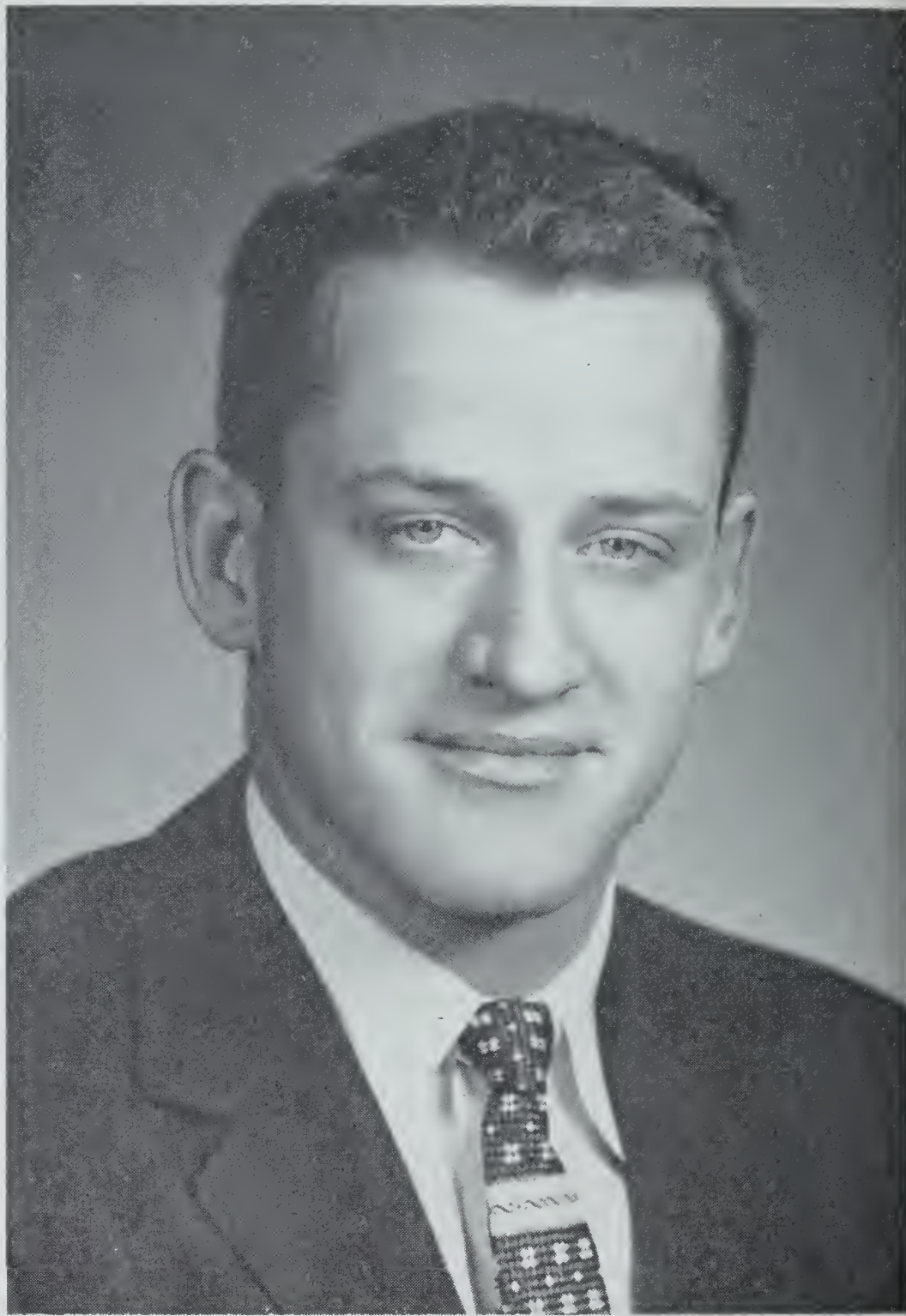
MISS UNIVERSITY HOSPITAL—Miss Joyce Thompson was crowned Miss University Hospital at the annual nursing dance. Miss Thompson is a student nurse and represented the Junior Nursing Class. From left to right are: Miss Dot Hawk, senior student and runner-up in the contest; Miss Joyce Thompson, the new Miss University Hospital; Miss Jo Ann Lewis, last year's queen; and Miss Bonnie Stockton, freshman student and runner-up in the contest.

DR. DUNBAR ELECTED TO PHI BETA KAPPA

Dr. John B. Dunbar, fellow in dentistry, Department of Oral Medicine, was formally initiated into Phi Beta Kappa national honorary at Birmingham-Southern College on May 14.

Members are chosen from the top ten per cent of the graduating class who possess a grade average of 3.4 or above.

Dr. Dunbar finished requirements for his AB degree in philosophy this past summer (1957), and was awarded his degree from Birmingham-Southern in May, 1958.



Elected—Dr. John B. Dunbar

Prior to his coming to the University of Alabama Medical Center in 1956, Dr. Dunbar attended Birmingham-Southern from 1947-49 taking a pre-dental course. He was admitted to the University of Alabama School of Dentistry in 1949, and received his Doctor of Dental Medicine in 1953.

Dr. Dunbar was in general practice in Birmingham until 1954 when he was called into the United States Air Force. After completing his term of duty, he returned to Birmingham-Southern in 1956 to continue his studies.

MEDICAL CENTER FACULTY ATTEND MEETINGS

The Medical Center was well represented in Atlantic City, N. J., during the month of May at meetings of the American Federation for Clinical Research, the American Society for Clinical Investigation, the Association of American Physicians, and the American College of Physicians.

Among those doctors from the Medical Center attending one or all of the meetings were Doctors William Hammack, L. L. Hefner, S. R. Hill, T. R. Harrison, W. B. Frommeyer, W. B. Jones, E. E. Eddleman, J. A. Pittman, J. B. Strachan, Earle

MEDICAL CENTER NEWS

Shugerman, Leo Hughes, Arthur Yount, Cecil Coghlan and John Lowder.

Dr. S. Richardson Hill, associate professor of Medicine, was elected a Councilor-at-Large of the National Committee of the American Federation for Clinical Research on May 4. This is a well deserved appointment for Dr. Hill, who has made many important contributions in clinical investigation, and who has done an outstanding job as a teacher. There are only five such Councilors throughout the United States.

At the annual meeting of the Association of American Physicians held on May 6, Dr. Leo Hughes and Dr. Tinsley R. Harrison presented a paper entitled "Precordial Bulges in Patients with Angina Pectoris." Dr. Harrison, professor in the Department of Medicine, was also elected a Councilor of the Association of American Physicians to serve for a period of five years.

Members of the Department of Medicine presented the following two papers to the American Federation of Clinical Research at the annual meeting in Atlantic City on May 4: "Interrelationships between Adrenal Cortical and Medullary Secretory Activity in Patients with Pheochromocytoma" by Doctors Sidney Chenault, Mattie

Gautney, Jean McNeil, and S. Richardson Hill; "The Effect of Therapeutic Doses of Salicylates on Adrenal Cortical Secretory Activity in Normal Subjects" by Doctors Mattie Gautney, Alexander Ulloa, Howard L. Holley, Gertrude Meyer, Etherene Pearson, and S. Richardson Hill.

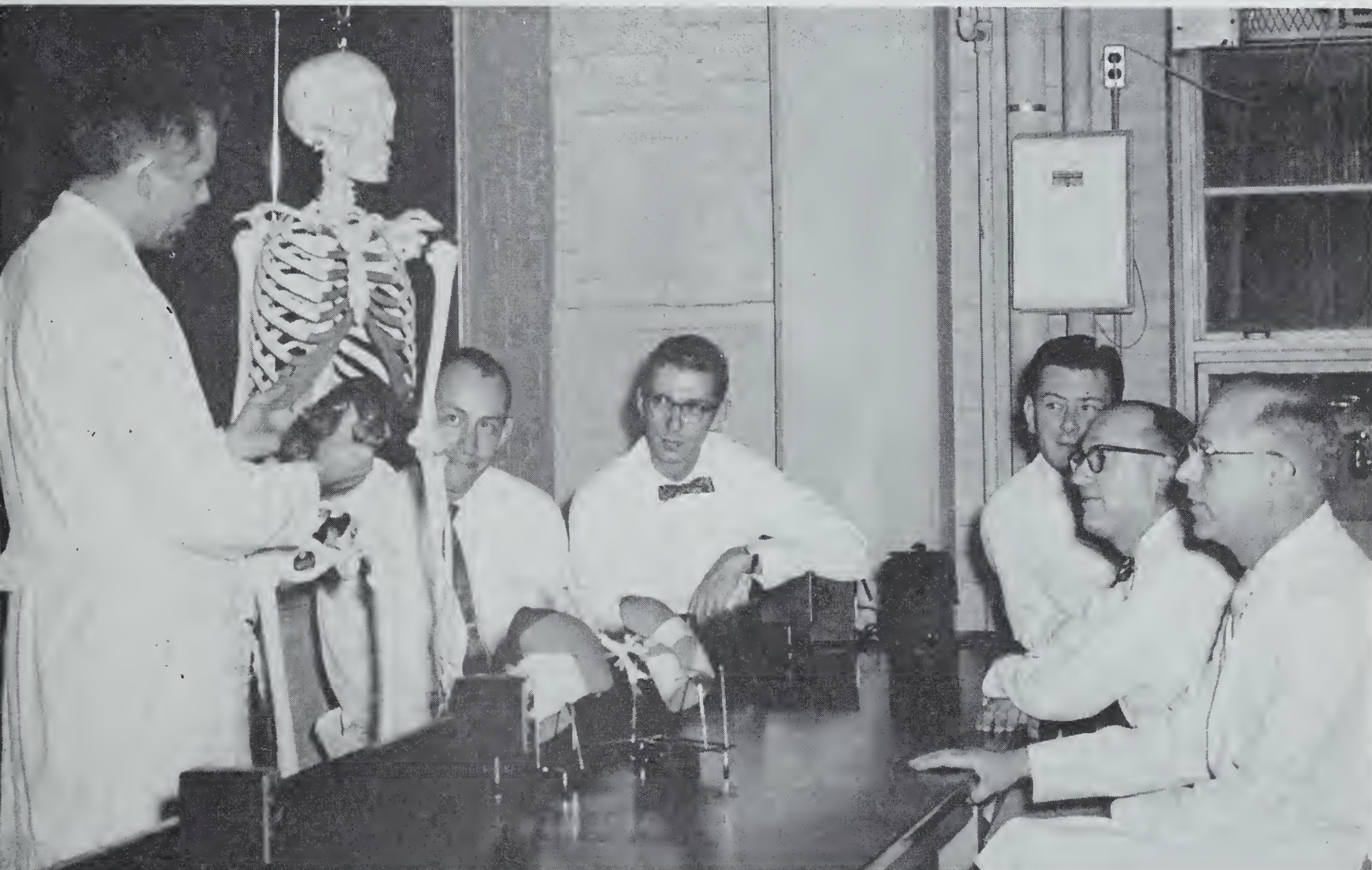
MISS GLADYS GRAVES HONORED BY TEA

A tea was recently held honoring Miss Gladys Graves, Chief Medical Records Librarian, who left the University Hospital after twenty-nine years of continuous service.



Miss Graves was presented a desk set engraved with her service date by Matthew F. McNulty, Jr., hospital administrator.

Department heads and administrative staff members were present for the presentation and attended the tea honoring Miss Graves.



ANATOMY TV SERIES—A series on Anatomy was featured on "Medical Center Report" over the Educational Channel during May. Demonstrations and discussions were given on gross anatomy, histology, neuroanatomy and embryology. From left to right are Doctors Henry H. Hoffman, Benjamin C. Moffett, Harold Schnitzlein, Mervyn Quigley, Thomas E. Hunt, and Clarence E. Klapper.

DEPARTMENT OF HEALTH

NURSING REPRESENTATIVES ATTEND MEETINGS

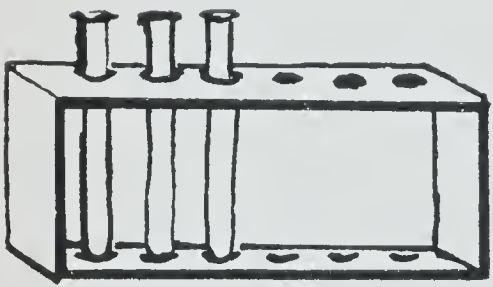
Mrs. Kathryn Crossland, Director of Nursing, University Hospital, and Miss Betty Tomlin, educational director, University Hospital School of Nursing attended the 1958 meeting of the Council of Member Agencies of the Department of Diploma and Associate Degree Programs. The meeting was held June 6 and 7 in Atlantic City, New Jersey.

Miss Betty Tomlin also attended the American Nurses' Association Convention in Atlantic City from June 9 through June 12. Miss Tomlin attended as a delegate for the E. A. C. I. section of the Alabama Nurses' Association.

DR. RAY O. NOOJIN PRESENTS PAPER

Dr. Ray O. Noojin, Professor and Chairman, Department of Dermatology, attended the meeting of the American Dermatological Association at the Challenger Inn in Sun Valley, Idaho, June 4, through June 8.

He presented a paper entitled "The Comparative Effect of Various Wet Dressings Upon Aseptic Cutaneous Wound Healing In Man." The co-authors of this paper are Dr. Robert A. Lewis and Dr. Charles H. Lupton.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

A NEW PROGRAM OF THE STATE HEALTH DEPARTMENT

A disease becomes a public health problem when it affects a large part of the population, when it is a frequent cause of disability and death, and when there is a strong possibility that the development and community-wide application of measures for prevention and control will be successful. There is no doubt that chronic diseases meet the first two of the above conditions: According to current estimates over half a million Alabamians suffer from some form of disability. The three leading causes of death—heart disease, vascular lesions and cancer—are long-term, disabling diseases.

In the belief and hope that chronic diseases also meet the third condition, Alabama's State Board of Health last year approved a plan to strengthen the state's public health programs in chronic disease and aging. Although services in the area of chronic diseases, such as tuberculosis, heart disease and cancer control and mental health, have long been offered by the Health Department, this is the state's first effort to attack the problem as a whole rather than in a piecemeal fashion. Initiation of the plan was made possible by a grant of federal funds for the purpose.

Health of the aging was included in the new program because the two problems are almost inseparable. The older members of our population are prone to develop the chronic diseases, and

they constitute an increasingly larger segment of the population. In 1956 two-thirds of all deaths in the 65 and over age group were due to diseases of the heart and vascular system, while cancer was the cause of death in 12.6 per cent of the group. Deaths from all other known causes, including accidents, accounted for only 20.6 per cent of the total. In the same year, seven and one-half per cent of Alabama's citizens were 65 years of age or older. All indications are that, in the future, the population will have an ever-larger proportion of the older group.

The new program has several purposes. In line with public health philosophy, the first, of course, is to develop a state-wide program aimed at the early detection and prevention of chronic diseases. The state program will be coordinated with local facilities, services and activities, and with other organizations, such as social service and rehabilitation agencies, which serve the same population groups. Basic to the development of this coordinated program will be a study of the state's needs in this field. The study will be designed to define and delimit the problem and will explore the need for new facilities and personnel.

Most inhabitants of nursing homes and related facilities in the state are old people. Many of them suffer from chronic illnesses while others are only undergoing the normal processes of aging. Since many of these facilities do not meet desirable standards, another purpose of the program will be to help to improve the quality and quantity of care rendered. A good beginning in this area has already been made by the Department's Division of Hospital Planning which licenses and inspects

such homes, and which has recently completed the preparation of regulations governing their construction and operation. Under the new program, the problem will be approached from another angle. Services will be offered to nursing home operators in the fields of nursing, nutrition and sanitation. There will be a nurse consultant to demonstrate and help to train nursing home personnel in good nursing procedures. Nutrition services will include assistance in planning diets, both for those who merely require good general nutrition and those who need special diets, such as diabetics. Similar services will be offered in regard to sanitation.

Health education will be another purpose of the program. The expected results of the educational activities are dual in nature. First, they will be expected to encourage the utilization of local facilities and medical and public health personnel to improve and increase the amount and quality of preventive and diagnostic services in chronic disease. Second, they are intended to acquaint the general public with the scope of this problem and the part which they can play in solving it. This part of the program will call for the preparation, procurement and distribution of all types of informational and educational materials.

Recruitment and training of personnel for programs relating to chronic disease is yet another purpose. Training will be offered to presently employed as well as new personnel.

Conducting and promoting studies and demonstrations in the chronic disease field on a pilot project basis will be included. One such pilot project is already in operation by the Jefferson County Health Department, which received a grant of funds for the purpose. This project is intended to show how activities of the health department can best be integrated with hospital, outpatient, nursing home and home care of the chronically ill to the best advantage of the community, and to develop guides on administrative procedure. The principal activity is conducting a case finding program and the development or employment of screening methods which will help to make the early detection of chronic disease possible. Services are being offered the medically indigent only. These services include diagnosis, treatment, supervision, observation and care. A visiting nurse service is provided. There is no age limit for persons eligible for these services, but emphasis is being placed on older persons.

As activities in the new program develop, special emphasis will be placed on home accident prevention, which has a logical place in a chronic disease program because accidents are a leading cause of death. For every person who has a fatal accident there are several who suffer permanent disability

as the result of an accident. Also, elderly persons are frequent victims of home accidents — there were 523 fatal home accidents in Alabama in 1957. Of the 523 victims, over one third, or 185 were 65 years of age or older.

Initiation of new laboratory procedures to be offered by the Health Department laboratories will probably be a necessity. Special studies relating to the fungus diseases and their long-time effects are already under way. Some of the findings of these studies possibly will be presented in a later issue.

Because it has been very difficult to find qualified people to carry out the new program, some phases are just now getting under way. A nurse and a nutritionist were employed only last month. They have begun developing that part of the program intended to improve the care offered in nursing homes. Also, with the cooperation of the illustrator and other personnel of the Division of Public Health Education, they have begun the preparation and development of informational material needed in the program.

Evaluation of progress and achievements in this new program will be done on a continuous basis, and changes indicated by such evaluation will be made whenever necessary. It is believed that the evaluation will show that the program is offering a valid, much-needed public health service to the people of Alabama.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

April 1958

Examinations for diphtheria bacilli and Vincent's	44
Agglutination tests	598
Typhoid cultures (blood, feces and urine)	603
Brucella cultures	5
Examinations for malaria	41
Examinations for intestinal parasites	2,859
Darkfield examinations	4
Serologic tests for syphilis (blood and spinal fluid)	25,171
Examinations for gonococci	1,627
Examinations for tubercle bacilli	4,225
Examinations for Negri bodies (smears and animal inoculations)	290
Water examinations	2,006
Milk and dairy products examinations	4,461
Miscellaneous examinations	673
Total	42,607

DEPARTMENT OF HEALTH

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS
1958

	Apr.	May	E. E.* May
Typhoid and paratyphoid	0	2	4
Undulant fever	0	0	2
Meningitis	9	11	12
Scarlet fever	942	887	28
Whooping cough	41	41	74
Diphtheria	1	3	6
Tetanus	4	4	3
Tuberculosis	154	247	200
Tularemia	2	1	1
Amebic dysentery	4	1	1
Malaria	0	0	1
Influenza	1039	314	232
Smallpox	0	0	0
Measles	2142	2774	1165
Poliomyelitis	2	0	7
Encephalitis	2	1	2
Chickenpox	243	201	239
Typhus fever	0	0	1
Mumps	192	146	270
Cancer	717	620	440
Pellagra	0	1	0
Pneumonia	289	276	182
Syphilis	98	112	219
Chancroid	4	1	8
Gonorrhea	261	310	374
Rabies—Human cases	0	0	0
Positive animal heads	18	19	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR MARCH 1958, AND COMPARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During March 1958			Rates* (Annual Basis)		
	Total	White	Non- White	1958	1957	1956
Live births	6851	4298	2553	25.3	25.5	26.0
Deaths	2833	1741	1092	10.4	8.9	8.4
Fetal deaths	141	56	85	20.2	22.3	21.6
Infant deaths—						
under one month	186	101	85	27.1	20.2	17.5
under one year	293	143	150	42.8	32.9	27.4
Cause of Death						
Tuberculosis, 001-019	35	20	15	12.9	9.7	11.2
Syphilis, 020-029	5	1	4	1.8	1.1	1.5
Dysentery, 045-048						0.4
Diphtheria, 055	1	1		0.4		
Whooping cough, 056						
Meningococcal infections, 057	5	2	3	1.8	1.1	0.7
Poliomyelitis, 080, 081	2	2		0.7		0.4
Measles, 085	1		1	0.4	1.5	0.7
Malignant neoplasms, 140-205	318	218	100	117.3	103.6	93.4
Diabetes mellitus, 260	48	25	23	17.7	12.3	10.8
Pellagra, 281	1	1		0.4		0.4
Vascular lesions of central nervous system, 330-334	408	245	163	150.5	127.8	115.8
Rheumatic fever, 400-402					2.2	1.5
Diseases of the heart, 410-443	878	593	285	323.8	300.7	285.5
Hypertension with heart disease, 440-443	165	78	87	60.9	63.3	56.8
Diseases of the arteries, 450-456	77	54	23	28.4	20.5	17.2
Influenza, 480-483	69	34	35	25.4	5.2	3.4
Pneumonia, all forms, 490-493	126	69	57	46.5	31.3	38.9
Bronchitis, 500-502	8	3	5	3.0	1.5	0.7
Appendicitis, 550-553	1		1	0.4	1.5	1.1
Intestinal obstruction and hernia, 560-561, 570	13	11	2	4.8	3.7	4.1
Gastro-enteritis and colitis, under 2, 571.0, 764	7	5	2	2.6	4.5	1.9
Cirrhosis of liver, 581	21	15	6	7.7	6.7	4.1
Diseases of pregnancy and childbirth, 640-689	6	4	2	8.6	15.7	7.0
Congenital malformations, 750-759	33	27	6	4.8	4.5	2.7
Accidents, total, 800-962	175	103	72	64.5	66.0	57.9
Motor vehicle accidents, 810-835, 960	67	47	20	24.7	30.6	31.8
All other defined causes	487	268	219	179.6	138.2	148.7
Ill-defined and unknown causes, 780-793, 795	108	40	68	39.8	38.0	30.6

Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

Power Mower Safety Rules Listed in Today's Health—
Power mowers are labor-saving tools, but they can be "deadly machines," as shown by a rising accident rate involving operators and bystanders.

Some rules for safe use of power mowers were outlined in the June Today's Health, published by the American Medical Association.

Dennis Orphan, associate editor of the magazine, said a two-year Georgia study showed 737 power lawn mower accidents resulting in 794 injuries. Of the injuries, 69.6 per cent were caused by direct contact with the mower, and 30.4 per cent by objects thrown by the mower.

"Most power mower accidents are due to carelessness," Orphan said. "The most common accident happens when operators attempt to start machines. They ignore safe procedures by starting the machine with one or both feet under the back or side of the machine.

"The second most common accident occurs when the operator mows on a hill or incline. He loses his footing and the machine rolls back over his feet."

He also pointed out that a four-cycle engine, turning a 20-inch blade at 3000 revolutions a minute can pick up a nail or stone and hurl it 170 miles per hour.

Thus power mower owners should develop "a healthy respect" for their machines and learn how to use them correctly.

Some rules listed by Orphan, for safe operation of mowers are:

—Clear the yard of all rocks, stones, nails, bones, wires, sticks, and other debris before you start.

—When you start the mower, keep your feet in a safe position away from the blades.

—Know how to disengage the clutch or how to stop the engine quickly in case of emergency.

—Store gasoline in an approved, tightly-sealed container in a safe place, and refuel the engine only when it is cool.

—Never work on the machine when the motor is running.

—Tip the mower by applying pressure on the handles. Never reach underneath and risk losing a finger.

—When mowing on rough terrain, set the blades high to prevent debris from being ejected from the mower.

—Keep your hands, feet, and loose clothing away from any moving part of the machine.

—Make sure the electric mower has a ground wire, and don't use it when it's wet or when it's raining, unless the machine and cord are in perfect condition.

—Don't leave the mower unattended when the motor is running and keep bystanders and pets away from the mowing area.

—Don't let the mower pull you. To maintain control, slow it down. Never run or trot.

—Don't cut up and down on hills. If you slip, the machine may slide over your toes. Cut sideways.

—Never remove anything from the mower until you are certain the blades have stopped.

—Don't increase the speed by tampering with the governor. Excessive cutting blade speed is dangerous.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

August 1958

No. 2

PSYCHIATRIC REFERRALS

EDWARD W. GAMBLE, III, M. D.

Birmingham, Alabama

The private practice of psychiatry is exclusively a referral type of specialty. Therefore the manner in which a referral is accomplished is most important. The material which follows will of necessity have some of the flavor of a critique. This whole area is quite a problem and yet every physician should have an awareness of how to handle this situation properly. In the proper execution of this phase of medicine the patient may greatly benefit. These words are written in a patient-centered manner in an attempt to assure better patient care.

These days one hears more and more of the concept of comprehensive medicine. One of the tenets of this medical orientation is that it is up to the physician to be aware of the total patient—thus this includes his emotional life. Medical schools in our country are now concentrating on turning out a physician who is capable of practicing comprehensive medicine; so that now psychiatry is being taught in all four years of medical school.

There have been various figures and percentages quoted concerning the number of patients having emotional problems of living. One of the ways that these facts are commonly expressed is as follows. Approximately one-third of the patients seeking medical aid have symptoms solely or primarily due to physiogenic pathology, another third of these patients have symptoms which are due to psychogenic pathology, and the remaining third have an admixture of both. Thus it becomes clear that most of the cases seen by physicians involve some psychologic, emotional, or social etiology. Symptoms in patients are nature's warning of difficulty. The difficulty is just as often psychological as it is physical. One can see from these statements that no doctor or specialty is going to be immune from these patients with emotional prob-

lems. Actually, no region of the body is immune to psychopathology.

Since this problem is so large and forms so much of every physician's practice, the question immediately comes up as to what cases and conditions the general physician treats and what cases should be referred to the psychiatrist. There are undoubtedly differences of opinion here also, but one suggestion follows. Psychotherapy by the general physician is sometimes designated as situational therapy and includes the patient's acceptance of psychogenicity on authority, as well as the uncovering and working through of current stresses. Psychotherapy in the hands of the psychiatrist may be called character therapy and includes uncovering and working through of neurotic character patterns, plus uncovering and working through of childhood traumata.

Now to some practical points which occur when one is faced with such problems. Always be honest with the patient and do not employ deception. In this instance, explain some things to the patient's family and thus get it properly mobilized. Do not threaten the patient with a psychiatric referral nor lure him into it.

After completing all the examinations and studies and no positive organic causative factors have been discovered, do not tell the patient that there is nothing wrong with him and so you are going to send him to a psychiatrist, or perhaps are going to dismiss him. Also, do not tell him that it is all in his imagination and thus you are going to send him to a psychiatrist. Actually, the patient knows better than this, so that if you take either of these positions, he cannot possibly react to these statements with much confidence or faith.

In presenting psychiatry to the patient, do not present it in a negative light. On the other hand, however, do not oversell psychiatry by saying to the patient that the person you are sending him to will effect a cure. Actually, as it turns out in

The author is Assistant Professor of Psychiatry, Medical College of Alabama.

everyday practice, it can be very reassuring to a patient to know that he is going to a person who can help get his emotional life under control.

A psychiatrist should be presented to the patient as a specialist in personality, feelings, behavior, emotions, and the like—not as a guardian of the mentally ill. A patient should be properly prepared for such a referral—just like you would not send a patient to a surgical operating room without proper preparation.

Another thing to avoid is getting the idea across to the patient that there is nothing more that you can do and therefore you are calling in a psychiatrist. This is to say that one should not use psychiatry as a dumping ground for patients that one does not know what to do with at all, or perhaps does not like. Do not express your own unconscious hostility or dislike for a patient by a psychiatric referral. Just as one should not make a psychosomatic diagnosis by exclusion only or as a last resort, so also one should not call on a psychiatrist as a last measure. The whole approach should be a positive one rather than a negative one. There are definite and positive indications in a patient as to when a psychiatrist should be contacted.

Psychiatrists have moved a long way from simple custodians of mental patients on the back wards of state hospitals until now they are mostly in private practice and are used by many of the agencies in a community—courts, schools, disability determinations, family counseling, draft boards, industry, alcohol committees, and mental hygiene clinics. Psychotherapy has come of age and is a major aspect of the psychiatrist's work and will probably remain his chief concern. All doctors, however, use some psychotherapy. It has broadened from a medical specialty to a point where it spills over into community activities and thus engages the attention of the diplomat, the statesman, the business executive, the labor relations expert, the teacher, and the industrial engineer.

As in the referral of other patients to other specialists, one should take time out to telephone the psychiatrist and give him the benefit of the history and appraisal of the patient and the reasons for such a referral. It is important that this communication takes place, as well as subsequent communication between the doctors.

It may be well to mention a couple of special situations that may arise with the patient. If the patient is going to need psychiatric hospitalization, one may at times want to accompany the patient to the ward and see that he gets admitted there. If one has a patient in a hospital and desires a psychiatric consultation for this person, one should introduce the patient to the psychiatrist.

The type of relationship that the doctor has with the patient and also how astute the doctor is at recognizing emotional problems will largely determine how successful a referral can be made to the psychiatrist. It is not the purpose of this discussion to encompass just what specific type of disorders should be referred to a psychiatrist, for it is my contention that many of the more minor psychiatric disorders can and perhaps should be cared for by the family doctor. The point is that one should be intellectually honest and recognize his limitations with certain patients and their emotional problems.

The position that the psychiatrist often finds himself in with the patient is that, because of improper referral techniques, the psychiatrist has to go back over things and try to smooth them out and clarify them to the patient in some reasonable way. On occasion the patient is so enraged by the referral tactics that the referral never actually comes about or at least is not lasting. As a doctor one should know what to expect from psychiatry as well as what not to expect. Certainly there is much suffering and unhappiness in the world about which psychiatry can do nothing at all.

Since the patient's motivation is so important to the outcome of psychiatric treatment, it is good practice to have the patient take the initiative in contacting the psychiatrist's office for an appointment. A doctor should not be ashamed to refer a patient to a psychiatrist. Actually, it has been the experience in psychiatry that quite often the patient is quicker to accept an emotional cause of his illness than the doctor is. It is definitely a part of a doctor's overall job to acquaint himself with the field of psychopathology which is defined as the branch of science which deals with morbidity or pathology of the psyche or mind—that is the cause and nature of mental disease. This is part of your armamentarium in order to practice comprehensive medicine. This implies much more than just giving lip service to psychiatric principles, but an actual belief in them with the idea that something can be done for these patients suffering from emotional problems.

Actually, treatment results in psychiatry compare very favorably to those in other branches of medicine. That is to say, certain conditions are easily helped by psychiatry as is true also, for instance, in internal medicine. However, some patients in psychiatry require chronic care, and others are rarely, if ever, helped. This statement can also be made of all the other specialties in medicine. Psychiatry is nothing mystic or magic and should not be presented to the patient in this manner. It is a field with very definite principles, practices, ethics, techniques, and limitations like the other branches of medicine.

One should not procrastinate in such a referral by subjecting the patient to multiple and really unnecessary examinations, operations, laboratory or radiologic studies which do little more than fix the patient's illness and perhaps also help exhaust his financial resources.

A few words are in order as to how to choose a psychiatrist to whom one could refer such a patient. It may be well to pick a psychiatrist who is a Diplomate in Psychiatry of the American Board of Psychiatry and Neurology. Also, get one whose training you know and in whom you have confidence. Since psychiatrists treat mostly with their personality, it is important for one to keep this in mind when referring a particular patient to a particular psychiatrist.

Physicians who are not psychiatrists can do a great deal in helping patients in the psychological aspects of illness if they are aware that, fundamentally, sympathy, considerateness, respect and understanding are, as they always have been, therapeutic tools of the greatest effectiveness. As part of the complete work with a patient, it behooves one to interpret the illness to the patient. This important function is frequently mishandled, particularly where emotional illness is involved. In the interpretation of psychogenic illness by the doctor, there are about three things that can go wrong: The doctor will avoid the interpretation, give an inadequate interpretation, or render a stigmatizing interpretation. The reasons why most physicians avoid interpretation to the patient are fear of wrong diagnosis, time not available, fear of losing the patient, and lack of ability. The results of inadequate interpretations are chronic invalidism of the patient, iatrogenic disease, strain on physician, disorganization of the family, and a lag in social progress.

CONCLUSION

Regardless of how skilful a nonpsychiatric medical man may be in managing the emotional problems of his patients, there will be occasions when he will have to call in a psychiatrist colleague. So it is necessary that doctors know the differences that are present in a referral to a psychiatrist as opposed to a referral to other specialists. These differences exist because of certain attitudes of the patient toward psychiatry, but often shared by doctors.

Two other things which should be kept in mind when making such a referral. A patient should be told that psychiatric care does not necessarily take as long as is commonly thought and also the patient does not have to be wealthy to go to a psychiatrist. As a matter of fact, the average patient who sees a psychiatrist is also average in level of income.

A psychiatrist is primarily interested in getting subjective data from the patient—that is information about emotions and feelings. The only way to find out these things is by having the patient talk about himself. So in a real sense, in psychiatry, listening to the patient is treatment. This is a very difficult concept for certain doctors to grasp.

Referrals can be poorly handled and the patients can show very clearly the effects of this. A referring physician can superimpose complications onto an already troubled personality. A physician, in dealing with a patient having emotional problems, should not let his own anxiety about being unable to relieve the patient's disorder come to the fore. The most important thing for the physician to remember is that he can best facilitate referral by clearing his own mind of anxieties and misapprehensions about psychiatry.

Meat Is Good Source of Iron for Premature Infants—

Anemia and iron deficiencies in premature infants can be partially overcome with the early addition of meat to their diet.

This dietary supplement, given within two to four weeks after birth, has particular value in increasing red cell volume and circulating hemoglobin mass and building iron reserves.

These conclusions are advanced after a study of 35 premature infants and are published in the June edition of the *Journal of Diseases of Children*, a publication of the American Medical Association.

The authors, Dr. Thomas R. C. Sisson and Lorraine E. Whalen, Rochester, N. Y., said "there is an almost inevitable development of anemia and iron deficiency in premature infants during the first year of life."

Since meat protein is well absorbed and utilized by infants, the present study was undertaken to determine if the early addition of meat to the diet would be an effective source of iron, the authors said. During the year-long test, customary diets for premature infants were given to all 35 babies. Fifteen were also given meat supplements beginning between the second and fourth weeks of life.

A marked contrast in the two groups was apparent within a few weeks, the authors said. Those receiving meat showed an increase of red cell volume and hemoglobin mass between the sixth and eighth week. This gain was not noted in the control group until about the twelfth week.

After this initial gain, the authors said that in the control group there began a decline in blood values which in some instances reached such a low level it was necessary to give medicinal iron treatment.

"The steady decline of these values . . . demonstrates the need for some effective iron source in the diet," they said.

Following their early gain, the blood values of the meat-fed infants remained at a constant level until the thirtieth week when they again showed an increase. This increase continued during the remainder of the study and a definite "increase in iron stores" was noted by the time of their first birthdays.

The authors said, "Strained meats were well tolerated by all infants, and frequent gastric distress associated with the administration of medicinal iron was avoided."

SOME PRACTICAL ASPECTS IN THE MANAGEMENT OF THE ANEMIAS

J. J. KIRSCHENFELD, M. D.

With Technical Assistance of H. H. Tew

Fort Deposit, Alabama

IMPORTANCE OF ANEMIA

The practice of medicine is strongly influenced by probabilities. A diagnosis may be accepted or rejected, in some circumstances, on the likelihood of its occurrence in a particular situation. The general practitioner will not hesitate to do a routine urinalysis on every patient in spite of the fact that urinary abnormalities are infrequent. (We found a 5% incidence of abnormalities in routine urinalyses.) However, it is the rare practitioner who performs a routine hemoglobin determination.

We have found, as reported in previous publications,^{1,2} that an abnormal hemoglobin level will occur in 20% of patients; thus an abnormal hemoglobin determination is four times as common as an abnormal urine.

In our particular practice we determined that anemia occurred in approximately the following order: 25% of Negro females, 20% of Negro males, 10% of white females, and 6% of white males.^{1,2} Any abnormality of such magnitude certainly deserves special emphasis. If it be accepted that a routine urinalysis is necessary, then it becomes even more mandatory to do a routine hemoglobin.

SIGNIFICANCE OF AN ABNORMAL HEMOGLOBIN READING

As a result of our study of 2,000 consecutive patients,² we determined that approximately 75% of the cases of anemia were due to iron deficiency. One-third of the latter were due to excessive blood loss, a third due to pregnancy, and another third because of a deficient diet. (This is still a very controversial point. Some authorities claim that iron deficiency cannot occur on a purely dietary basis but requires an additional abnormal blood loss. No source of abnormal blood loss could be demonstrated in these patients. Many were of the older age group and of the lower economic strata. These patients were followed for years without developing any signs of blood loss or disease and all responded to an improved diet and iron medication.)

The remaining 25% of the cases of anemia were in the following categories: approximately 10% were produced by serious diseases such as nephri-

tis, rheumatoid arthritis, uremia and malignant disease. Ten per cent, in addition, were caused by infections, usually chronic, of all types. The remaining 5% were miscellaneous, rare types of anemia such as hemolytic, sickle cell, pernicious and the anemias due to hemoglobin disease.

It is thus apparent that 9 out of 10 patients found to have an abnormal hemoglobin determination can be easily diagnosed and easily treated with anticipation of complete cure (iron deficiency, infections, pernicious anemia). There are very few abnormalities found in the practice of medicine that are so easily discovered and are readily correctible.

In some cases a routine hemoglobin determination that is found to be abnormal can lead the way to the proper diagnosis of the patient's disease. It will demand an explanation and, therefore, will lead to further studies. This is especially true in the white male patient where anemia very often indicates a disease process; one-third of the anemias in the Negro male will similarly suggest the presence of disease. On the other hand, a great majority of the anemias in the female are due to excessive menstrual blood loss or pregnancy and rarely disease. (It is the rare woman who is aware of the quantity of blood lost with menstruation. A small amount of excess blood loss of this type over a six month to one year period of time may eventually lead to iron deficiency anemia.)

WHAT IS A NORMAL HEMOGLOBIN AND HOW IS IT DETERMINED?

We feel that the usually accepted hemoglobin standards for anemia are set too high. Based on our previous studies^{1,2} we do not feel that a patient has anemia unless the hemoglobin level is below 11 grams per 100 cc. in the female or 12 grams per 100 cc. in the male. We even lower this line one gram per 100 cc. during pregnancy and in the aged (over the age of 70). To our minds the only accurate method of doing office hemoglobinometry is by means of the photoelectric colorimeter. This machine is easily mastered and the results are reproducible. Anyone can be taught this procedure. A colorimeter is considerably less expensive and much more useful than a basal metabolism or diathermy machine and, yet, will add immensely more to the quality of medical practice. It can be easily adapted for simple blood sugar and NPN determinations and, needless to say, in the hands of a good technician, can be employed to do most blood chemistries.

1. Kirschenfeld, J. J., and Tew, H. H.: Prevalence and Significance of Anemia as Seen in a Rural General Practice, J. A. M. A. 158: 807-811 (July) 1955.

2. Kirschenfeld, J. J., and Tew, H. H.: Anemia as Seen in a Rural General Practice, GP 16: 107-113 (November) 1957.

ANEMIA

The colorimetric hemoglobin determination is simple and rapid (does not take over three minutes). Fingertip or venous blood can be drawn into a pipette supplied with the machine, brought

to the proper mark with the diluting fluid, and the entire mixture drained into an absorption cell which is then placed in the machine. After several minutes the colorimeter can be read and the hemo-

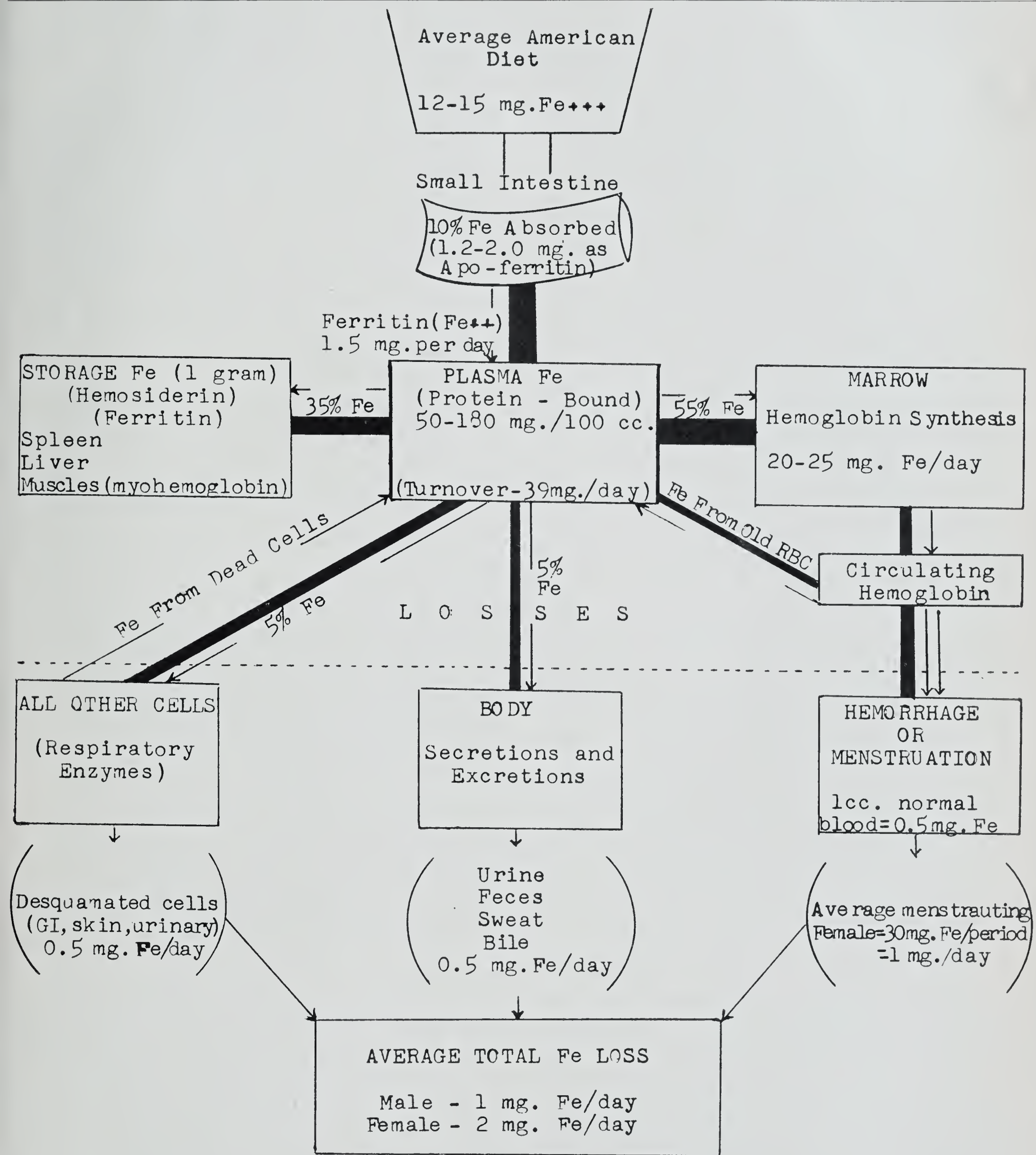


Figure 1. IRON METABOLISM⁽⁴⁾ (Adapted)

4. Moore, Carl V., and Dubach, R.: Metabolism and Requirements of Iron in the Human, J. A. M. A. 162: 197-204 (September) 1956.

globin determined in grams per 100 cc. This method eliminates the inaccuracy of subjective interpretation of color which is used with many

simple methods today. Incidentally, the hemoglobin value should never be reported as a percentage figure. The latter implies an accepted value of 100 per cent, which is not the case.

MECHANISMS IN IRON METABOLISM

Since three out of four cases of anemia are of the iron deficiency type, it is essential to understand the basic events in iron metabolism (Fig. 1). Provided that an infant was born at maturity and had an adequate diet (the iron intake must be 0.5 mg. per day in excess of body losses of 1 mg. per day in order to increase body stores from 0.5 gm. at birth to 3-5 gm. at maturity), then the adult will have adequate iron stores (3-5 gm.). The distribution of the body iron and the kinetics of its metabolism are depicted in Figure 1. After the first twenty years of life (growth period), the iron status of the individual remains relatively stable, since the iron in the body is re-used; minute quantities are lost in secretion and excretion (approximately 1 milligram per day). It is only necessary to replace with dietary iron that which is lost through excretion, i.e., in the bile, sweat, feces, urine and desquamated cells (GI tract and skin). The menstruating female and the pregnant female are unique in that there are additional losses.

Approximately 5 to 10 per cent of the dietary iron is assimilated under normal circumstances (Fig. 1). This will usually be adequate for normal iron metabolism in adults. An unknown process is operative in the gastro-intestinal cells which determines the amount of iron absorbed. It is quite probable that the gastro-intestinal mucosa will accept or reject iron depending on the body's needs.⁵ It has been verified that absorption of iron is increased in established iron deficiency, pregnancy and childhood. However, there is, apparently, a saturation level above which no additional iron reaching the mucosa will be absorbed (exception—hemochromatosis). The concentration of iron in the gastro-intestinal cells must fall to a certain level before any additional iron is absorbed. Iron deficiency states with resultant hypochromic anemia can occur as follows:

1. An iron deficient diet or poor absorption of iron can eventually lead to production of iron deficiency anemia without any obvious additional blood loss (this is a disputed point). In adult men or postmenopausal women, who are in good health with normal iron stores, nutritional iron deficiency can only occur where there has been a negative iron balance for a period of four to five years. Anemia will develop much faster in children since the daily requirements for iron are higher. (0.5 mg. additional for growth.)

2. Iron deficiency is most likely to occur during

5. Bothwell, T. H., and Finch, C. A.: The Intestine in Iron Metabolism, *Am. J. Digest. Dis.* Vol. II, No. 4, 1957.

pregnancy and the menstruating years. This is due to the precarious iron balance in the female which becomes negative with any additional loss. The average menstrual blood loss is 50 to 80 cc. (25-40 mg. iron), equivalent to 0.5 to 1 milligram iron loss per day (1 cc. normal blood contains 0.5 mg. iron). A lightly soaked pad contains 10 to 15 cc. of blood; a heavily soaked pad contains 20-25 cc. of blood. Where the menstrual period requires over 10 lightly soaked pads or 5 saturated pads, we may have a negative iron balance. We usually assess this blood loss by having the patient identify pictures of variously blood soaked pads. We then calculate the total loss as follows: cc. of blood per pad (average—10-15 cc.) x number of pads per period (average 5-8 pads) equals cc. blood lost per menstrual period (average—50-80 cc.). The pregnant female provides the fetus with 0.5 grams of iron which amounts to an additional iron loss of 2.7 mg. per day.

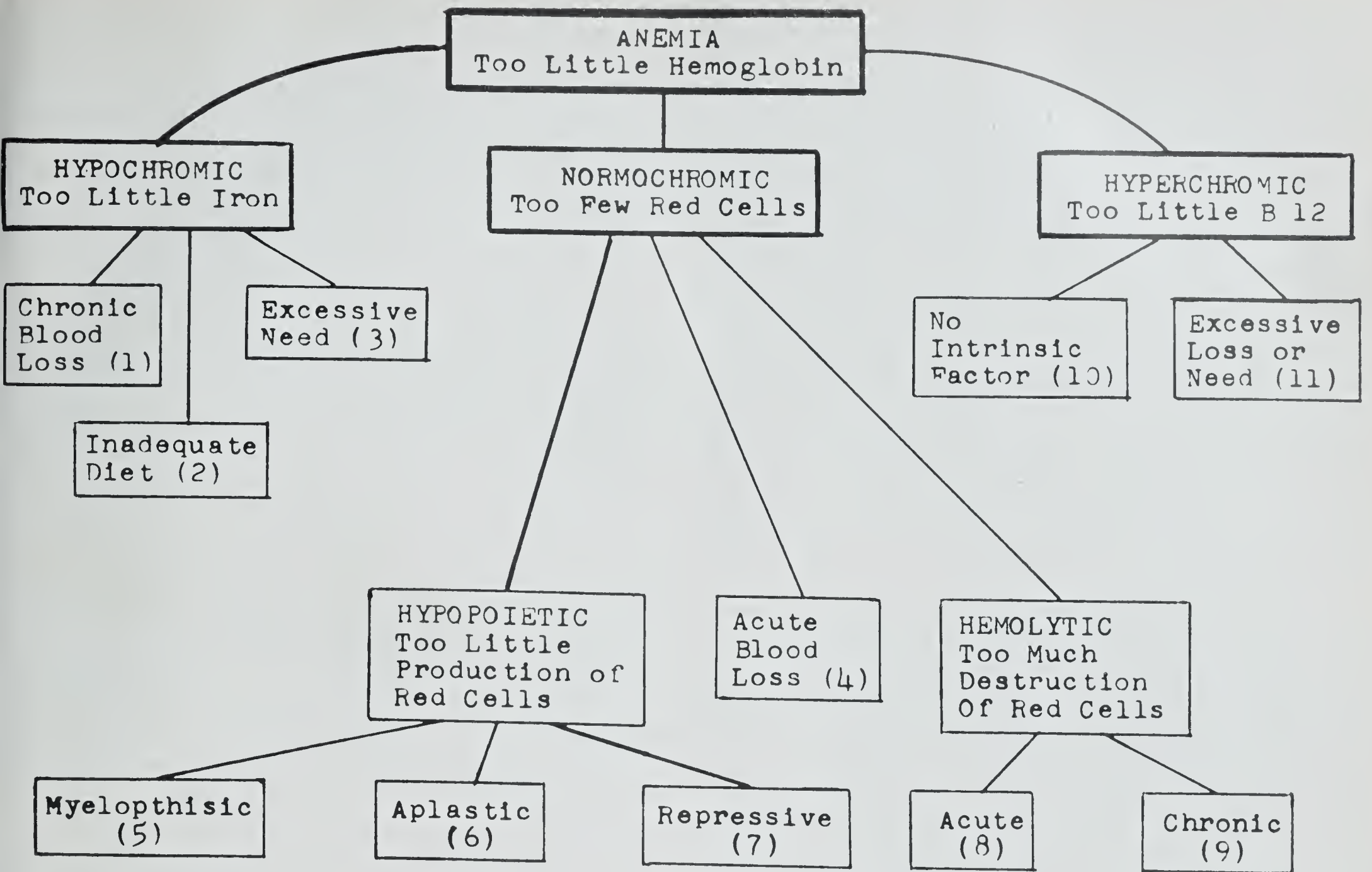
CLASSIFICATION OF ANEMIA

The simple classification of anemia devised in our daily work is based on the hemoglobin determination and an adequately performed blood smear (Fig. 2). This will immediately identify the great majority (90%) of anemias without further study. The first step requires an accurate photoelectric colorimetric hemoglobin determination. A reading below 11 grams per 100 cc. in the female or 12 grams per 100 cc. in the male indicates anemia. A thin blood smear is then prepared. The central portion of the slide, where the cells are most evenly dispersed, is carefully examined under oil immersion. The average red cell in this area is measured and its color and structure determined. (In studying a blood smear it is important to realize that the red blood cells are best studied in the central portion of the slide.)

In studying these red cells the first question to be answered is as follows: Does the average red blood cell contain a normal amount of hemoglobin (normochromia)? Is the cell deficient in hemoglobin (hypochromia); does it have too much hemoglobin (hyperchromia)? If the average cells are ring forms or "doughnuts" then we have hypochromia; if the average cell appears to be evenly stained with only a slightly lighter area in the center then we can say that this is a normochromic picture; on the other hand if the cell stains a much more intense color without any central area of lightness then it is hyperchromic. The next question to be answered concerns the size of the average red cell. A scale in the eye piece of the microscope will give an exact measurement; a fairly good estimation can be arrived at through experience.

If the average red blood cell is hypochromic and the patient is an adult female prior to menopause, it is almost certain that she has an iron deficiency

ANEMIA



- (1) Loss of iron through gastro-intestinal, genito-urinary, menstrual, or respiratory bleeding.
- (2) Too little supply of iron or proteins.
- (3) Excessive needs in pregnancy, adolescence or childhood.
- (4) Acute bleeding from any cause.
- (5) Replacement of marrow by carcinoma, leukemia, myeloma, lipoid storage, or sclerosis.
- (6) Poisons, metals, radiation or idiopathy.
- (7) Chronic infections, renal, carcinoma, pregnancy, thyroid deficiency or tuberculosis.
- (8) Acute infections, poisons, transfusion reaction or malaria.
- (9) Congenital and acquired hemolytic icterus, sickle cell anemia, thalassemia or erthroblastosis.
- (10) Pernicious anemia
- (11) Pregnancy, sprue, celiac or liver disease.

Figure 2. Classification of Anemia

type of anemia due to excessive menstrual periods. It would be good medicine to stop at this point and treat this female patient with ferrous sulfate for a period of two weeks. A hemoglobin increase at the rate 0.3 to 0.5 gram per 100 cc. or more per week and an increase in the reticulocyte count of 5 to 15 per cent would certainly prove this to be true. On the other hand, in the same situation if the patient were a male or a postmenopausal female, then an abnormal source of blood loss should be diligently searched for (gastro-intestinal especially). A fairly large percentage of this latter

group will not demonstrate any appreciable blood loss and will respond to iron therapy. These fall into the controversial group of dietary iron deficiency anemia.

A blood smear revealing large hyperchromic cells suggests a hyperchromic, macrocytic anemia such as pernicious anemia or one due to intestinal or liver disease. The history, physical examination, blood indices and, occasionally, a bone marrow smear will serve to differentiate this group.

A smear containing normochromic cells in a majority suggests either acute blood loss, a marrow

that is not producing enough cells to make up for normal wear and tear, or a disease state where there is excessive destruction of red cells in excess of the compensatory capacity of the bone marrow (usually 6 times normal). The history will rule out acute blood loss. A hemolytic process (excessive destruction of red cells) will be indicated by presence of a high reticulocyte count, splenomegaly, jaundice, an elevated stool and urine urobilinogen, occasionally by a positive Coomb's test, or some abnormality of the red cells on the blood smear. Further classification would then depend on more detailed studies. The third possibility, i.e., a decrease in bone marrow production, would be indicated by an absence of increased production of red cells (low reticulocyte count) and a bone marrow biopsy. Occasionally it becomes necessary to utilize the newer studies such as radio-active-tagged red blood cells, etc.

If properly prepared and properly interpreted, a blood smear will supply many additional bits of information. The presence of significant polychromatophilia usually indicates a very active production of red cells and, therefore, possibly hemolytic disease. The latter diagnosis can be further accentuated by finding a high reticulocyte count. The presence of a double population of red cells, i.e., such as target cells, ovalocytes or sickle cells, in addition to normal cells will suggest the possibility of a hemoglobinopathy. Electrophoretic studies usually will prove or disprove this. Leukemia or infectious mononucleosis may be suspected by the presence of immature white cells. These diseases could be the cause of an otherwise obscure anemia. A high eosinophilia will point towards parasitic disease or allergy.

A fairly accurate platelet count can be elicited from the same blood smear by counting the platelets present in association with 1,000 red cells in a number of evenly distributed microscopic fields. The following proportion is then true:

No. platelets counted	—	Platelets / cu. mm.
1000 RBC	—	RBC/cu. mm.

A much simpler and fairly adequate method without actually counting the platelets is as follows: the presence of one clump and several single platelets per average microscopic field will indicate a normal platelet count.

A reticulocyte count is often vital as an aid in diagnosing the more obscure types of anemia and in following the progress of treatment. A simple method of counting is as follows: a small drop of fingertip or venous blood is placed on a slide. A large drop of 1% saline solution of brilliant cresyl blue is placed near the drop of blood. These are mixed and covered with a thin cover slide. The preparation is allowed to stand for ten minutes and

then blotted with blotting paper. A thousand or more red blood cells in a number of different microscopic fields are counted and the percentage of reticulocytes determined. This percentage multiplied by the red blood count will give the number of reticulocytes per cubic milliliter of blood. (A reticulocyte counting lens can be purchased and inserted in the eyepiece of the microscope. This is not necessary but helpful.)

In some instances it is necessary to calculate the blood indices in order to diagnose the rare types of anemia. Red blood count, hematocrit, and hemoglobin are necessary for these calculations. The standard normogram, as in Wintrobe's "Clinical Hematology," will then supply the indices.³ (The red count should be determined several times and averaged since it is most likely to be in error.) It is essential to do a sickle cell preparation on all Negro patients with anemia. This is performed simply and rapidly by employing a 2% solution of sodium metabisulfite. This is added to a drop of fingertip or oxalate blood. After five minutes this preparation is examined for sickling under the microscope. This is much better than the old hanging drop method where the preparation very often dried out.

EXAMPLES OF THE DIFFERENT TYPES OF ANEMIA

The accompanying charts show typical examples of the various types of anemia as seen in a general practice. The steps employed in making the diagnosis in each case are outlined. We maintain that this can be done by any general practitioner.

TREATMENT OF ANEMIA

The cardinal principle is stated as follows: "Never treat an abnormal hemoglobin or blood count." Anemia is a manifestation of a disease or deficiency. The process may be a dietary one, excessive bleeding, pregnancy, infection, abnormal hemolysis, bone marrow failure, malignancy, etc. The anemia can be corrected only by correcting the basic pathology and then supplying the lacking factors (Figure 2).

Anemia caused by "too little hemoglobin" is due to iron deficiency (hypochromic anemia), and requires iron only. (Ferrous sulfate is the simplest and best.) Anemia due to "too few red blood cells" (normochromic anemia) requires administration of red blood cells, in suspension or as blood, plus elimination of the underlying disease which is causing either loss of cells or destruction of cells or inhibition of bone marrow production. Anemia due to "too little B₁₂" (pernicious anemia or the macrocytic, hyperchromic anemia of intestinal disorders, liver disease or pregnancy) requires administration of adequate B₁₂ parenterally or, in some cases, folic acid.

3. Wintrobe, M. N.: Clinical Hematology, ed. 3, Philadelphia, Lea and Febiger, 1946.

ANEMIA

CASE HISTORY OF PATIENTS WITH VARIOUS TYPES OF ANEMIA

Case No.	I. E. B.	II. J. N. G.	III. V. W.	IV. D. F.
Type of Anemia	Hypochromic Microcytic	Normocytic Normochromic	Hemolytic (Acquired)	Sickle cell
Age-Sex-Color	32-Female-Negro	64-Male-Negro	58-Female-White	30-Male-Negro
History	Para IX, postpartum, three months, severe weakness.	Weakness, loss of weight, vomiting, nocturia five times with difficulty.	Vomiting, epigastric distress, anorexia, weight loss, three months duration.	Jaundice at one year of age. Sore on leg for three years. Episodes of anorexia, constipation, weakness and dark urine for many years. Weakness of legs for many years.
Initial Physical Findings	Pallor, lassitude, weakness and signs of chronic illness.	Pallor, signs of chronic illness, uremic odor, hard, large prostate, BP-170/100	Pallor, signs of chronic illness, tenderness in gall bladder region, slight enlargement of the spleen.	Jaundice, ataxic gait, incoordination of legs, long thin legs and fingers with long thin body.

PART I

CASE HISTORIES OF PATIENTS WITH ANEMIA . . . CONTINUED

Case No.	V. M. S.	VI. E. D.	VII. S. T.	VIII. J. C.
Type of Anemia	Hemoglobin "C" Disease	Pernicious Anemia	Paroxysmal Nocturnal Hemoglobinuria	Acute Leukemia
Age-Sex-Color	36-Female-Negro	68-Male-Negro	25-Female-Negro	89-White-Male
History	Menorrhagia due to fibroids which required hysterectomy one month ago.	Weakness—3 to 5 months duration.	Syncope and weakness of 4 days duration. Low abdominal pain. Patient noticed dark brown urine two or three times in the past few days.	Weakness, vomiting, two to three weeks duration. Had been eating poorly.
Initial Physical Findings	None	Pallor, reflexes negative, smooth tongue.	Negative except for pallor.	Severe pallor, patient unable to walk.

PART I (CONTINUED)

CASE HISTORIES OF PATIENTS WITH ANEMIA . . . CONTINUED

Case No.	I. E. B.	II. J. N. G.	III. V. W.	IV. D. P.
Hematological Workup				
Hb (gm./100cc.)	3.3	6.55	7.5	8.2
RBC (millions/cu. mm.)	2.09	2.81	2.42	3.22
WBC (per cu. mm.)	3,550	4,000	5,000	- - - - -
Hematocrit (mm.)	13	24	25	- - - - -
Sickle Cell	Negative	Negative	Negative	Positive
Color Index	0.38	0.79	1.05	- - - - -
Smear	Hypochromic, microcytic cells	Normochromic, normocytic cells	Normochromic, normocytic cells	Normochromic, normocytic cells; some sickle cells
MCV	61	82	93	- - - - -
MCH	15.5	23	30	- - - - -
MCHC	26%	27%	- - - - -	- - - - -
Reticulocyte	1%	1%	6%	- - - - -
Special Tests		NPN-127.5 mg.%	Free hydrochloric acid in stomach. Van Den Berg direct-1.75 indirect-1.95 Coomb's test-positive. Sternal marrow-erythroid hyperplasia with increased number of macroblasts. Urine urobilinogen-positive. Fragility test-hemolytic. X-rays-negative	Bilirubin direct-4.35 indirect-2.5 Serum albumin-2.9 Serum globulin-3.55 Urine urobilinogen-1 to 160.

PART II

ANEMIA

CASE HISTORIES OF PATIENTS WITH ANEMIA . . . CONTINUED

Case No.	V. M. S.	VI. E. D.	VII. S. T.	VIII. J. C.
Hematological Workup				
Hb (gm./100cc.)	7.75	7.0	5.0	4.45
RBC (millions/cu. mm.)	5.76	1.64	1.97	1.46
WBC (per cu. mm.)	6,100	5,900	9,500	7,700 (initially-then 21,800,27,350,40,900)
Hematocrit (mm.)	32	24	15	14
Sickle Cell	Negative	Negative	Negative	Negative
Color Index	0.49	1.63	- - - - -	0.95
Smear	Hypochromic, microcytic with many target cells	Macrocytic, hyperchromic cells	Erthrocytes Normochromic, normocytic. Moderate polychromatophilia White blood cells normal	Normocytic, normochromic cells. Anisocytosis and frequent polychromatophilia. Platelets reduced. White cells-very immature, monoblastic type and monocytic type with marked shift to left.
MCV	- - - - -	- - - - -	- - - - -	95
MCH	- - - - -	- - - - -	- - - - -	30.4
MCHC	- - - - -	- - - - -	- - - - -	31.8
Reticulocyte	- - - - -	- - - - -	19%	6.6%
Special Tests	Bone marrow-negative. Total proteins 6.85 Urine urobilinogen-negative. Coomb's test-negative. Electrophoretic studies-"A" Hb.-75% "C" Hb.-25%	No free hydrochloric acid in stomach after histamine. Bone marrow-megaloblastic	Coomb's test direct negative. Erythrocytic fragility slightly increased resistance in hypotonic salt, icteric index-33.8 units. Serum hematest-4+ Urine urobilinogen positive 1-40. Presumptive test for warm and cold hemolysins-negative. Positive for acid hemolysin.	Coomb's test-negative NPN-44.5 mg.%. Stools-negative for blood. Bone marrow-erythroid-myeloid ratio-1 to 2 with definite shift to left, primarily in the monocyte series.

PART II (CONTINUED)

CASE HISTORIES OF PATIENTS WITH ANEMIA . . . CONTINUED

Case No.	I. E. B.	II. J. N. G.	III. V. W.	IV. D. P.
Treatment	Immediate blood transfusion. Long range-high protein diet and ferrous sulfate. Eradication of cause of blood loss.	Immediate blood transfusion, indwelling catheter. Long range balanced diet. Diethylstilbesterol. Vitamins and fluids.	Immediate and long range cortisone.	Vitamins, nutritious diet, treatment of crises as they occur. Blood transfusions only when absolutely necessary.
Course	After 1000 cc. of blood . . . Hb-6.5 gm. per 100 cc. After 3 weeks of iron. Hb.-9.85 gm. per 100 cc. After 5 weeks of iron Hb.-11.0 gm. per 100 cc.	After 10 days Hb-6.15 gm. per cent. NPN-87 mg. per cent. After 1000 cc. of blood NPN-135 mg. per cent. After 5 mos. NPN-87 mg. HB-8.75 gm. per cent.	After 2 weeks Hb-10.4 gm. per cent. After 4 weeks Hb-11.6 gm. per cent. After 8 weeks Hb-12.5 gm.%. Off of cortisone 3 months Hb. dropped to 7.5 gm.%. Retreatment with cortisone. Hb. back to normal.	Hb. remains at 8.2 gm.% despite all therapy.
Specific Diagnosis	Iron deficiency anemia due to multiparity and chronic blood loss.	Repressive anemia due to uremia.	Acquired hemolytic anemia. Cause is unknown.	Sickle cell anemia with cirrhosis of liver and neurologic involvement

PART III

ANEMIA

CASE HISTORIES OF PATIENTS WITH ANEMIA . . . CONTINUED

Case No.	V. M. S.	VI. E. D.	VII. S. T.	VIII. J. C.
Treatment	No response to iron orally or intra-venously. Balanced diet and vitamins. Treatment of crises.	B ₁₂ intramuscularly.	Conservative	Blood transfusion and cortisone.
Course	After 7 months no change in hemoglobin	After 10 days Hb-8.75 gm.%. Reticulo-cytes-18%. After 3 weeks, Hb-9.8 gm.%. After 1 month Hb-11.6 gm.%. After 3 months Hb-14.6 gm.%.	After three days Hb-6.15 gm. per cent. After two weeks- Hb-9.3 gm. per cent. Reticulocytes-2 per cent.	Only temporary im-provement with blood transfusions and in spite of 2000 cc. of blood hemo-globin returned to pretreatment level within two weeks.
Specific Diagnosis	Hemoglobin "C" disease.	Pernicious anemia.	Acute paroxysmal nocturnal hemoglobinuria.	Acute monocytic leukemia resulting in an acute myeloph-thisic anemia

PART III (CONTINUED)

Treatment of anemia is highly specific. It is just as specific as insulin and diet for diabetes. There is never any justification for the use of a multiple, "shot-gun" type of hematinic. It is bad medicine and a useless strain on the patient's pocketbook. If one were tempted to treat all anemias in the same manner, then I would suggest prescribing ferrous sulfate. Percentage-wise, you will be right three times out of four. The other one fourth of the cases will not be harmed although not helped by this therapy. The patient will not be out more than a penny or two per tablet. The cost of the hematinics very often varies from 10 to 20 cents per capsule. They are valueless for this one fourth of the anemias and no better than simple ferrous sulfate for the other three fourths. In addition they can mask a pernicious anemia and cause irreversible neurologic disorders.

In summary, then, where anemia exists, it will be "picked up" by a properly performed photo-electric colorimetric hemoglobin determination and will be classified 9 times out of 10 by the proper interpretation of a thin blood smear. In any event, the blood smear will suggest further studies when necessary. In the great majority of cases, treatment can be started following the interpretation of a good blood smear. It is thus apparent that any doctor's office can be a good hematology laboratory for the vast majority of the anemias. It is the rare case, perhaps 1 out of 10 or less, that will require referral to a hematologist.

1959 ANNUAL SESSION

BIRMINGHAM

APRIL 9, 10, 11

Polio Vaccine Does Not Cause Brain Damage—Suspi-cions that Salk polio vaccinations might cause damage to the brain or central nervous system are unfounded, two Chicago researchers said recently.

This observation was made following an extended clinical study of 852 persons in all age groups who received three inoculations with the vaccine.

The study was prompted by reports which were cir-culated during the 1956 mass inoculation program to the effect that children were developing convulsions and other signs of central nervous system disorders after being vaccinated.

Mrs. Erna L. Gibbs and Dr. Frederic A. Gibbs termed the outcome of the study "astonishing." "We had not expected to obtain such completely negative results with a biologically potent material."

Writing in the June 21 Journal of the American Medi-cal Association, they said it was their intention to de-terminate if a mass immunization program against polio-myelitis could cause brain disorders in some persons.

Sudden, unexplained illnesses, some of which defy the most expert diagnosticians, are common in many children.

"By coincidence," they said, "an unexplained illness could follow a Salk vaccination at just the right time to convince the family and even the physician in charge that the vaccination was responsible for the child's ill-ness or even his death."

If the brain suffered abnormalities as a result of a Salk inoculation, it would be indicated by the presence of encephalitis, an inflammation of the brain.

This condition occurs on extremely rare occasions following vaccination against disorders such as whoop-ing cough, rabies, diphtheria, and tetanus.

Encephalitis is detected by means of an electroen-cephalograph, which measures electrical activity within the brain. A slowing of the waves would indicate a reaction and probable presence of the condition.

In the study, electroencephalographic tests were given to each of the 852 patients before and after the three Salk inoculations.

Since no abnormalities were uncovered, the research-ers concluded that "Salk vaccine is unlikely to cause an encephalitic type of reaction or brain injury."

The test, according to the authors, also showed that epileptics and persons with prior brain damage can be safely given the vaccine.

THE SURGICAL MANAGEMENT OF THE POSTPHLEBITIC LEG ULCER

(This report is based on a 10-year study)

DAN C. DONALD, M. D.

Birmingham, Alabama

The postphlebitic limb, accompanied by swelling, induration, and skin changes, ulceration, etc., is the major sequela of the milk-leg disease syndrome. Its management has challenged the medical profession since its first recognition. At present there are two schools of thought as to treatment, and both have their advocates: the conservative (non-surgical) and the surgical group.

The former group emphasizes protracted bed-rest with elevation of the involved limb, local applications of different solutions and various medications, both locally and systemically, for combatting the infection and healing of the ulcer; followed with support to the limb in the form of an Ace bandage or stockinette after exercise has begun.

Since the majority of the cases of postphlebitic limb are seen in patients who have to maintain a livelihood on their feet, medical management is chiefly limited to patients in the upper financial bracket, who are able to meet the hospital or home expense; time loss from work, and other future expense; as there is a great tendency for reactivation or flare-up of the infection (ulcer) of the leg after activity is resumed.

The surgeon's concept of management of the milk-leg ulcer case is, first, to cure the ulcer, employing standard surgical measures, including an ambulatory support to the limb to aid in the healing of the ulcer; and postpone operation for a period after the ulcer has healed to lessen the chance of wound infection. The type of surgical approach should be directed to reducing or overcoming the increased pressure in the venous channels of the limb after ambulation.

At present the following surgical procedures are employed: (1) stripping the superficial veins (internal and external saphenous trunks), wide excision of the ulcer bearing area and skin graft; (2) interruption of the femoral vein beneath the profunda femoris branch, or the popliteal branch, complete removal of saphenous veins (internal and external), including the involved tributaries at the saphenous-femoral region, and interruption of defective communicative branches or perforators in the thigh and leg, beneath the fascia; and (3) lumbar sympathectomy (which acts on the vasomotor mechanism).

Formerly we employed the first outlined plan, but with time and after resuming activity in a fairly large percentage of the cases, there would be a return of infection (ulcer) at the site of

graft, and, in many cases, destruction of the graft occurred, with continued induration and swelling of the limb. This was thought to be due primarily to failure of removing all the deep defective communicative branches of the limb, and non-interruption of the superficial femoral vein to overcome the neurovascular spasm that follows deep thrombophlebitis.

For the past 10 years we have employed the second procedure in all postphlebitic ulcer cases except, occasionally, interruption of the superficial femoral vein was omitted. The omission was primarily carried out for evaluation of interruption versus non-interruption of the superficial femoral vein. The interruption of the vein has been found to give the best results.

During this 10-year period we have had the following number of private cases in which interruption of the superficial femoral vein was included in the operation, with these results: 46 cases, to whom questionnaires were mailed. Of this group, 39 questionnaires were returned. Of the cases reported, 89.7% had no return of the varicose veins; 84.7% had no return of ulcer; 15.3% reported return of the ulcer; and 3 of this group stated the ulcer was caused by trauma to the limb; 46.1% free of residual edema of limb; 23.2% reported varying degrees of edema, but less edema than before operation; 61.5% had not employed support to the limb; 33.3% had employed support, and 5.2% used support occasionally.

DISCUSSION OF THE POSTPHLEBITIC LEG SYNDROME

Among the factors to be considered in the discussion of these cases are: (1) the differentiation of the simple varicose ulcer versus the postphlebitic ulcer; (2) the patho-physiologic changes resulting from thrombophlebitis of the deep veins; and (3) a brief review of the anatomy of the venous circulation of the leg.

Homans¹ was the first to recognize the difference in the pattern of the ulcer found in primary varicosity of the superficial veins versus the postphlebitic ulcer. Primary varicose ulcer is found to ride the dilated varices with minimal skin changes, scleroderma and fibrosis, and moderate thickness of the skin surrounding the ulcer. It is usually found opposite the shin or the lower medial mid-third of the leg. Rarely will there be

1. Homans, J.: The Operative Treatment of Varicose Veins and Ulcers Based Upon a Classification of These Lesions, Surg., Gynec. and Obst. 22: 143-158, February 1916.

induration of the tissues and swelling of the leg; whereas, in the postphlebitic ulcer the ulceration is widespread; usually located on the lower medial leg above the malleoli. Occasionally, the ulceration encircles the entire lower limb. The ulcer involves the skin and subcutaneous tissue, and the leg becomes a mass of edematous scar tissue; accompanied by swelling and induration of the limb with irregular dilated varicose channels of the internal saphenous vein.

CLINICAL TESTS TO DETERMINE WHETHER THE INCOMPETENCY IS CONFINED TO THE INTERNAL SAPHENOUS VEIN OR TO THE COMMUNICATING VEINS

Among the clinical tests employed in determining the valvular deficiency occurring in the superficial veins alone, or both the saphenous and communicative veins, the following tests are of value: (1) Trendelenburg,² in 1890, described the following method for testing valvular deficiency of the saphenous system, to wit: With the patient in a supine position, elevation of limb above the heart level for sufficient time for blood to drain from the leg, followed by application of tourniquet or bandage at groin, sufficient pressure by the tourniquet to occlude the internal saphenous vein. Have the patient exercise (walking) for 5 to 10 minutes. If the incompetency is confined to the internal saphenous vein alone, the vein remains empty until the leg veins are filled by the natural circulation. (2) For determining the incompetency of the communicating veins, Linton's³ constriction test is carried out by placing the tourniquet or bandage around the limb below the knee. Normally, the blood cannot leak into the superficial veins, even in the presence of varicosity of the superficial veins, unless the communicating valves are defective. In the absence of defective communicating veins, it requires $\frac{3}{4}$ to 1 minute before the surface veins will fill so as to be detected. If, on the other hand, the perforators or communicating veins are incompetent, the surface veins will fill below the point of constriction within 10, 20, or 30 seconds, according to the importance of the leak.

PATHOLOGY FOUND IN THE POSTPHLEBITIC LEG

The incompetency of the valves of the deep veins of the lower limb is responsible for the leg changes found in the milk-leg disease syndrome. The degree of the vein infection and the damage to the valves will be the common denominator as to the future soft tissue changes occurring in the limb, such as swelling, induration, and skin changes: stasis dermatitis, stasis cellulitis, sclero-

derma, or ulceration.

In iliofemoral thrombosis, commonly known as phlegmasia alba dolens, the entire deep venous system of the lower limb will become involved, resulting in obstruction to the venous flow of the limb. This type of infection is followed with a greater degree of change than when the smaller venous branches, such as the anterior or posterior tibial and peroneal veins, are involved. A well-taken history of the inception of the leg complaint, its relationship to previous surgery, childbirth, systemic infections, trauma, etc., plus a careful examination of the limb, will furnish much information concerning the etiology of the infection and the veins involved.

Occasionally a case of milk-leg disease syndrome will be seen in which the history fails to show cause of the vein change. A review of the literature classifies such cases as idiopathic in type due to phlebosclerosis of the deep veins. Bauer,⁴ in reporting on 650 cases of proven vein incompetency, studied by phlebograms, findings at operation, and microscopic study of removed segment of vein found 329 cases of this group to be the result of postthrombotic infection, whereas 321 cases revealed no history of previous thrombosis; but clinically the latter group of cases fitted in identically as per sex relationship and involvement of one or both limbs, and microscopic study of the removed segment of vein.

In thrombophlebitis of the deep veins the damage is not confined to the parent vessel alone but extends to the surrounding perivenous tissues, including the communicative veins and their valves, the capillary bed and its lymphatics. As a result of the above infection, there is damage to the communicating vessels and valves, interruption of the tissue fluid flow of the capillaries, and crippling of the lymphatics.

In the early stage of thrombophlebitis, the involved vessels will become occluded by the thrombus, thereby blocking the return venous flow from the limb. Edema of the limb follows. In the course of six to twelve months the thrombus is usually absorbed. Totten⁵ reports finding a canalized thrombus in the femoral vein 30 years following thrombophlebitis of the deep vein. Following absorption of the thrombus, canalization of the vein occurs. Concurrent with the luminal venous change, the valves which were involved by the thrombus become inadequate for normal venous function. The parent vein no longer remains a soft elastic tube but becomes a hard fibrous cord, devoid of a normal channel, with inert valves. The

2. Trendelenburg, O.: Ueber die Unterbindung der Vera Saphena Magna bei Unterschenkelvaricen, Beitr. z. Klin, Chir. 1890, VII, 195.

3. Linton, R.: Modern Concept in the Treatment of the Postphlebitic Syndrome With Ulceration of the Lower Extremity, Angiology 3: 431-439, December 1952.

4. Bauer, G.: The Rationale and Results of Popliteal Division, Angiology VI, 169, June 1955.

5. Totten, H. P.: Surgical Treatment of the Postphlebitic Leg, Angiology, IV: 38-55, February 1953.

resulting physiologic changes are responsible for orthostatic venous overloading and stasis during ambulation, as observed in the postphlebitic case. Homans⁶ states that, following canalization of the vein, the increased venous pressure is greater than when the vein is obstructed by the thrombus. Following absorption of the thrombus and canalization of the vein, the open vein lumen has no protection, as during thrombosis, against the gravity of the blood from above, permitting the blood to gravitate from the body into the lower limb. Edwards⁷ recognized the damaging effect of thrombosis on the valves, and stated the damage to the valves by the infection made the valves inadequate for supporting the blood as it is pumped from the leg by the contraction of the calf muscles (the venous or mechanical heart), thus permitting the blood to regurgitate back to the point from which it was pumped.

Consequently, the end result on the venous pressure after exercise is found to be the same as before the contraction of the muscles takes place. When the mechanics for normal venous flow, consisting of patent non-canalized vein and normal valves, are interrupted by phlebitis, the work of the venous or mechanical heart is powerless to overcome the venous stasis.

PHYSIOLOGIC CHANGES OCCURRING IN THE VENOUS CIRCULATION ASSOCIATED WITH THE POSTPHLEBITIC LIMB

The ambulatory venous hypertension following thrombophlebitis of the deep veins is the chief factor responsible for the physiologic changes found in the postphlebitic limb cases. Beecher,⁸ Hollings,⁹ et al.; Hojensgard,¹⁰ and other investigators for venous pressure determination, utilizing the saphenous vein, found the venous pressure, with the patient in the upright position, static state, to be hydrostatic. (The hydrostatic pressure is the pressure of a column of blood between the point of vein puncture and heart level, both in the normal, primary varicose veins, and in post-thrombophlebitis.) Whereas, in a dynamic state (walking) there is a clear difference between normal and varicose, whether primary varicosity or

postphlebitic. In the primary varicosity with compression of the saphenous vein at the saphenous femoral junction proximal to the point of measurement, the pressure will fall to normal on exercising, provided the communicating veins are not involved. In the postphlebitic limb, compression of the saphenous vein with exercise does not cause fall in pressure. Instead, in many cases the increased pressure is well above the colloid osmotic blood pressure (45 cm. of water). The increased pressure is transmitted to the venous capillaries, the arterial flow to the capillaries is diminished, resulting in a diminution of oxygenation of the capillary bed and undernourishment of these tissues. There will be an escape of red blood cells, transudation of protein rich fluid, with resulting edema of the limb. Another factor for the edema formation is the crippling or damage the thrombophlebitis has on the lymphatics of the capillary bed. Normally, the tissue fluid that fails to drain by the venous capillaries is removed by the lymphatics. Thus, the failure of the compensating mechanism of the lymphatics is thought to be responsible for some of the complications of the postphlebitic limb.

ANATOMY OF THE VEINS OF THE LOWER LIMB

The veins of the lower limb consist of three systems: the superficial, deep and communicative. The superficial system consists of the long or internal saphenous and the short or external saphenous veins. The internal or long saphenous vein has its origin from the superficial and deep arches of the medial surface of the foot. It runs in the subcutaneous tissues in front of the internal malleoli, along the course of the medial surface of the tibia up opposite the knee, where the vein blends around the knee and runs subcutaneously to the lower third of the thigh where it pierces the fascia and runs beneath the superficial fascia and empties into the deep femoral at the foramen ovale. The external or short saphenous vein has its origin from the same arches of the foot as the internal or long saphenous, except it is located on the outer surface of the foot, runs superficial behind the external malleoli to the middle third of the calf of the leg where it pierces the deep fascia and runs in a cephalic manner between the two heads of the gastrocnemius muscle and empties into the popliteal vein. The deep veins consist of the anterior and posterior tibial and the peroneal veins. These respective veins form the popliteal vein in conjunction with the external saphenous vein. After leaving the popliteal space the deep vein is then considered the superficial femoral until it is

6. Ibid, No. 1 above.

7. Edwards, E. A., and Edwards, J. E.: The Effect of Thrombophlebitis on the Venous Valves, Surg., Gynec. and Obst. 65: 310-320, September 1937.

8. Beecher, H. K.: Adjustment of the Tissue Fluid in the Presence of Localized Sustained High Venous Pressure as Found with Varices of the Great Saphenous System During Walking, Clin. Investigation 16: 735-739, September 1937.

9. Holling, H. E., Beecher, H. K., and Linton, R. R.: Study of the Tendency to Edema Formation Associated with Incompetence of the Valves of the Communicative Veins of the Leg, Clin. Investigation 17: 555, March 1938.

10. Hojensgard, I. C., and Sturup, H.: Venous Pressure in Primary and Postthrombotic Varicose Veins, Acta chir. Scandinav. 99: 133-153, 1949 and 1950.

joined by the deep profunda branch in the upper third of the thigh. The deep profunda branch drains the posterior lateral portion of the thigh muscles as well as the lateral portion of the leg. From the point where the superficial vein is joined by the deep profunda, the vein is called the common femoral and runs as the common femoral up to and opposite the inguinal ligament (Figs. 1 and 2).

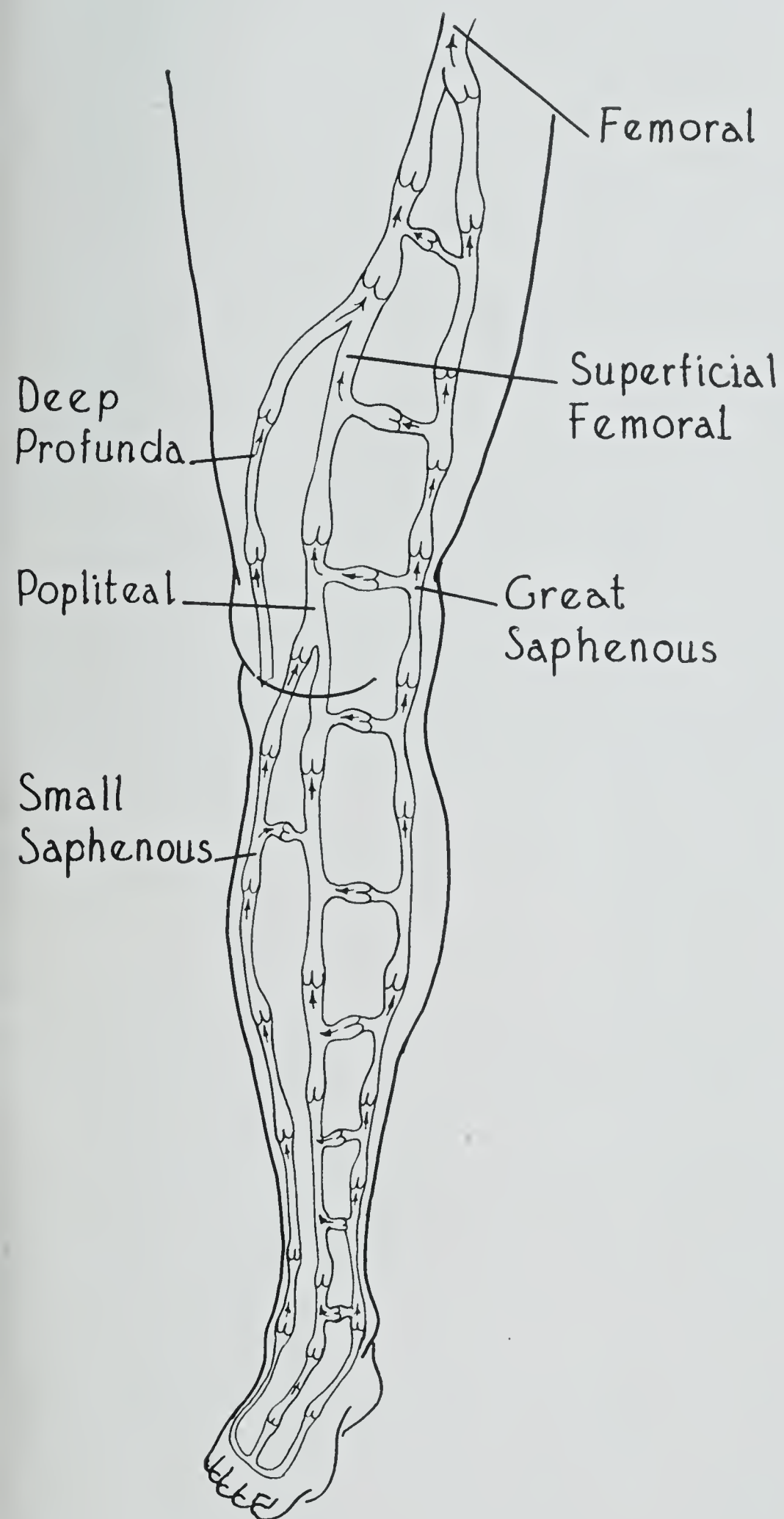


Fig. 1: Shows normal venous circulation of lower limb, to wit: ascending flow in the superficial and deep veins with valves placed in a cephalic manner, except for the communicating veins, where the flow is from the superficial to the deep veins.

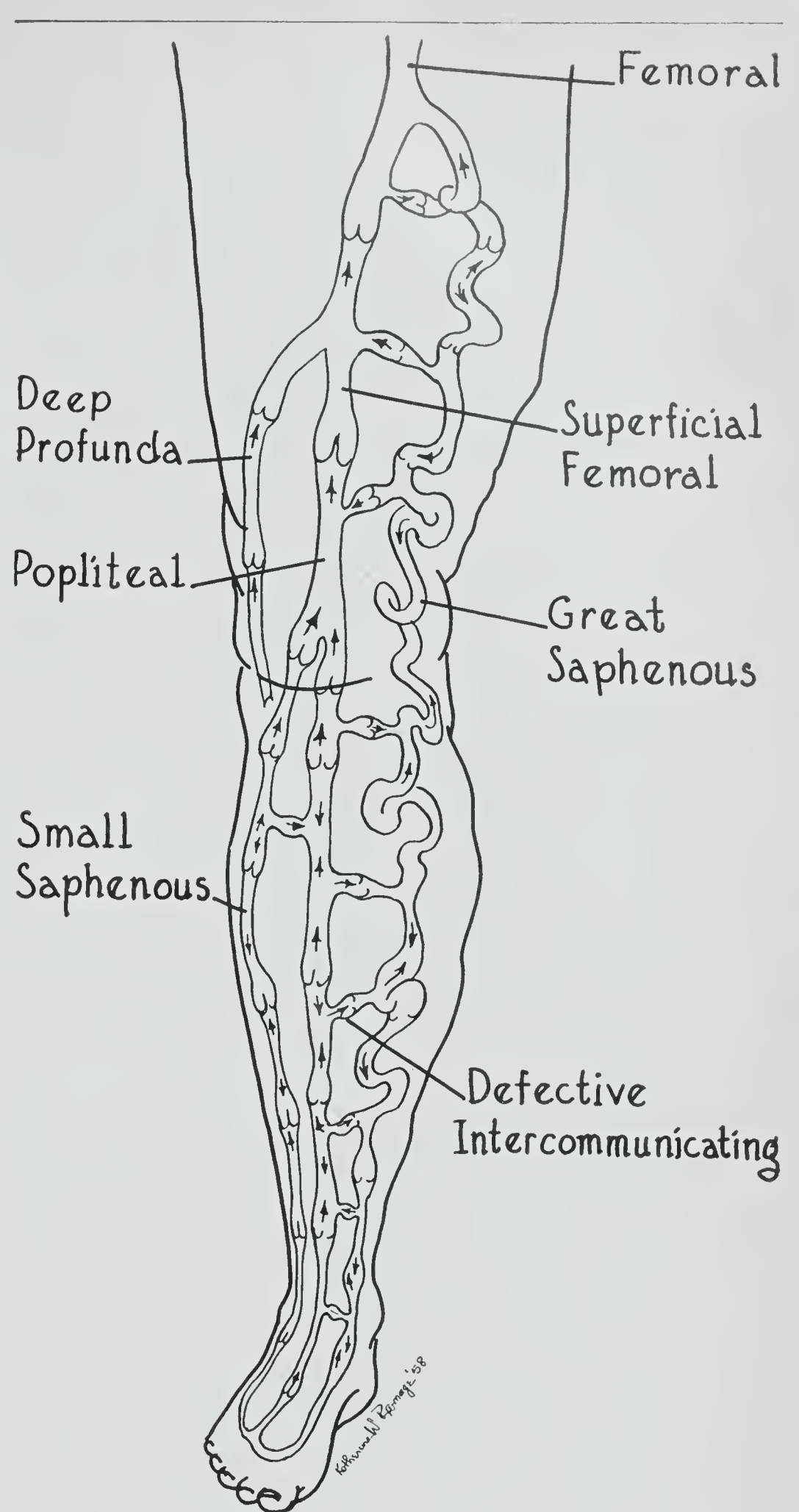


Fig. 2: Shows marked varicosity of the internal saphenous vein with less degree damage to the external saphenous vein with defective communicating veins and damage to the valves of the deep veins of leg and superficial femoral.

Throughout the lower limb the deep veins have many communicating branches with the superficial veins and a less number of communicating veins in the lower thigh area. It must be remembered that the common femoral vein does not have any tributaries or branches, and, for this reason, any interruption of the common femoral vein will result in a complete blockage of the deep venous circulation of the limb. It can be said that interruption of the deep femoral with simultaneous interruption of the long or internal saphenous vein

will result in edema and induration of the limb, greater than that found when ligation is made of the inferior vena cava. Both the superficial veins as well as the communicative veins are staffed with valves and the position of these valves is in the direction of the flow of the venous blood to the heart; except the valves of the communicating veins which are directed from the superficial to the deep circulation. The blood supply of the main channel veins is formed by the vaso-vasorum.

MANAGEMENT OF THE POSTPHLEBITIC ULCER

The treatment consists of the three following stages: (1) first, cure the ulcer; (2) the operation should be directed to combatting the venous ambulatory hypertension or stasis of the limb and interruption of the neurovascular bed (superficial femoral vein, its ligation and division); and (3) supporting the limb with an Ace bandage for three or more months after operation to overcome post-operative edema.

When the ulceration of the leg is found active, accompanied by a free amount of discharge, presence of hemolytic streptococcus infection, alone or mixed infection, including the fungus group, best results in curing the ulcer are obtained by putting the patient to bed, elevating the limb on pillows, with continuous application of moist dressing to limb and daily change of dressing. The solutions found most effective in bringing the infection under control are: normal saline solution, 2% solution aluminum acetate, or 1/1000% solution permanganate of potash. After 5 to 7 days of such treatment the infection is usually brought under control. Following the above treatment, ambulatory support to the limb in the form of a modified Unna's¹¹ boot is applied. Prior to the application of the boot, the limb should be thoroughly cleansed with soap and water. Instead of employing Unna's paste, sterile gauze immersed in sterile vaseline is applied to the ulcer bed. The vaseline dressings should be of sufficient thickness to absorb the discharge, reinforced with dry sterile gauze. The dressing should be immobilized with elastic plastic bandage, 4" width, 5 yards long, extending from base of toes, including heel, to below the knee.

Additional remarks on the treatment of the intractable ulcer which fails to heal with conservative local treatment: Advise removal of ulcer as advocated by Homans,¹² by excising the ulcer-bearing area, including skin well beyond the involved area of the ulcer, including the deep fascia and defective communicative veins, down to nor-

mal muscle and periosteum, followed with split skin graft. The objection, even if the ulcer is cured, is the ugly depression in the leg, and this treatment is used only as a last resort, especially in women.

In preparing the skin of the limb that is not covered by the vaseline dressing, application of compound tincture of benzoin to the skin will aid in fixation of the elastic bandage with minimal irritation to the skin by the bandage. The patient is permitted to resume normal duties. At first the dressings should be changed on a 7 to 10-day basis. With reduction of ulcer discharge, the interval between dressings can be extended to two or three weeks. After complete epithelization (healing) of ulcer, the vaseline dressing is discontinued and the elastic adhesive bandage is applied to the limb, using only 2 or 3-ply gauze over the healed ulcer site, which is worn for 8 to 12 additional weeks before operation. During the treatment of the postphlebitic ulcer with residual induration of the superficial tissues caused by venous stasis, the skin of the limb is frequently found moist (hidrosis) offering good culture for fungus infection which is a definite factor in the cellulitis and lymphangitis frequently encountered in these cases. We have employed different fungicides to combat the fungus infection, among which are Desenex ointment, or mixture of 2% each benzoic acid, boric acid, and resorcinol in 95% ethyl alcohol. Since the fungi inhabit the nail bed of toes and between the digits of the feet, the fungicide application should be directed to such areas as well as to infected areas of the limb. Since ethyl alcohol is sometimes irritating to the skin, Desenex ointment is preferred.

OPERATIVE TREATMENT

In fairness to the operative management of the sequelae seen in the postphlebitic limb, due to irreversible changes produced in the venous valves of the deep venous system by the thrombotic process, the impaired venous return and damage to lymphatics will not be restored to a normal state, but, with a well-organized surgical program it is possible to cure the chronic ulceration and stasis dermatitis in many of the extremities and, at the same time, relieve the other thrombotic sequelae.

The operative treatment of the thrombotic ulceration consists of removal of the enlarged superficial veins, especially in the lower leg; namely, internal and external saphenous veins and their tributaries; interruption of the communicative veins beneath the fascia, especially those on the inner and posterior sides of the lower leg; interruption of the canalized superficial femoral vein and the valveless venous system, internal saphenous in the upper thigh. Finally, removal of a strip of fascia from the posterior leg to aid the

11. Unna, P. G.: Ueber Paraplasticine Neueform Medikamentoser, Pflaster, Wein, Med. Wchnschr. 46: 1854-1896.

12. Homans, J.: The Etiology and Treatment of Varicose Ulcers of Legs, Surg., Gynec. and Obst. 24: 300-311, March 1917.

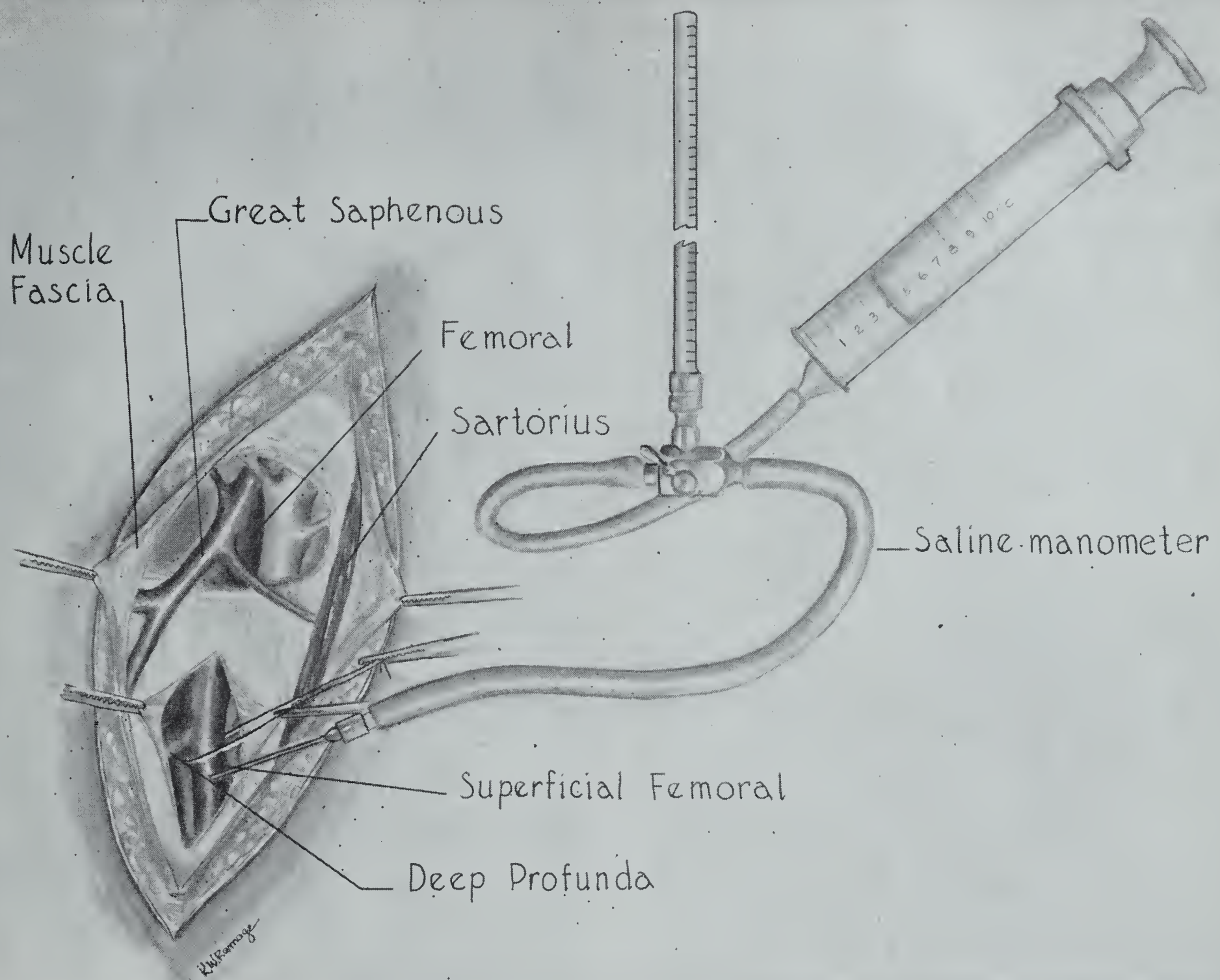


Fig. 3: Linear groin incision extending below the inguinal ligament, down to and opposite the lower end of Scarpa's triangle with exposure of the internal saphenous vein and tributaries. Incision through the deep femoral fascia opposite lower Scarpa's triangle, showing

lymphatic drainage of the skin and subcutaneous tissues onto the lymphatics of the muscles. To accomplish the above means extensive surgery to the upper thigh and the lower leg (Fig. 3).

The first step is exposing the internal saphenous and the superficial femoral vein in the upper thigh through a longitudinal incision, extending from below the inguinal ligament downward to the level of the abductor canal. The incision is carried through the skin and superficial fascia. The internal saphenous vein lies medial to the mid-thigh, observed but not disturbed at this stage. The femoral fascia is incised, and the femoral artery and vein inclosed in their sheath are found lying medial to the sartorius muscle. The sheath of the femoral vessels is incised in a downward manner, when the femoral artery, beneath which is the profunda femoris vein and superficial femoral vein, will be found beneath the artery. The vein is found adherent to the artery by the previous inflammatory change following the vein in-

the profunda branch and beneath the profunda branch, temporary ligature applied around the superficial femoral with needle in superficial femoral for obtaining pressure of said vein.

fection, and is usually thickened and canalized. By fine dissection, using blunt point scissors, the vein is separated from the artery for a distance of six or more centimeters below the profunda. The pressure of the superficial femoral vein is determined by using a saline manometer before and following temporary occlusion of the vein. If the pressure rises more than twice the initial value after temporary occlusion of the superficial femoral vein, it is unwise to interrupt the vessel. As a rule, however, the pressure rise following occlusion of the superficial femoral is only a few centimeters, and frequently the pressure falls. Exercise care in the separation of vein from artery not to traumatize the latter because, if it is damaged, thrombosis may develop and gangrene of the extremity may result. Interruption of the vein is made by ligation at the proximal and distal ends of the proposed removed segment of vein, employing non-absorbable material (silk or cotton). The proximal ligation should be in close proximity to

the deep profunda femoris branch. Avoid leaving a cul-de-sac or excess of vein stump between the ligation of the superficial femoral and profunda femoris branch to encourage thrombosis; followed with excision of the vein between points of ligation. Hemostasis, if present, is carried out at the site of the removed segment of vein, using silk or cotton ligature, followed with closure of the femoral fascia of thigh but no closure to the femoral sheath (Fig. 4).

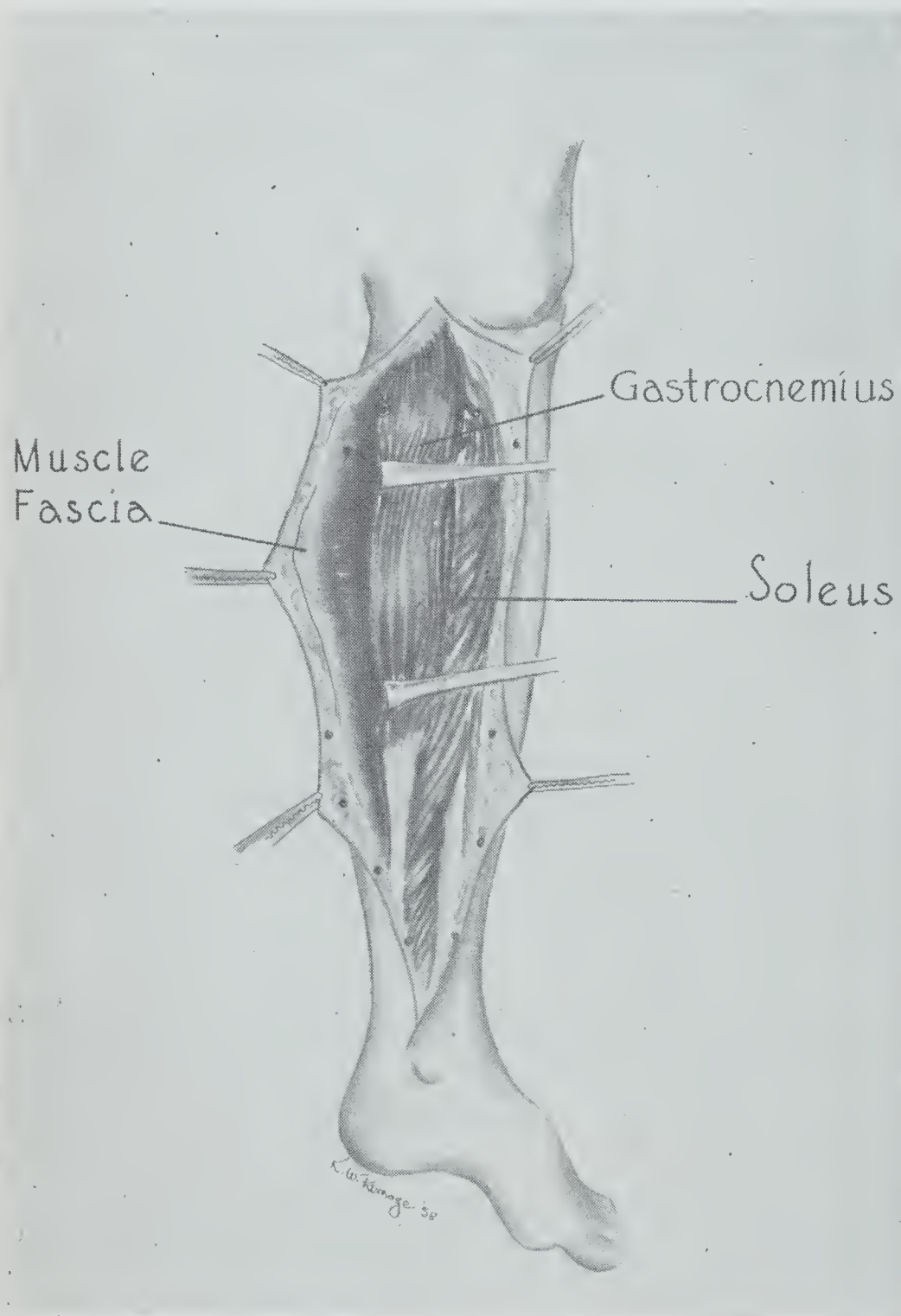


Fig. 4: Incision of the medial surface of leg. The internal saphenous vein and tributaries have been removed, deep fascia incised, interruption of the defective communicating veins, retraction of the gastrocnemius and soleus muscle from the deep fascia, preparatory to interruption of the communicating veins of the posterior leg and removal of the external saphenous vein through an incision of posterior fascia.

The common femoral vein should never be interrupted in this procedure, because if it and the internal long saphenous vein are both interrupted, there remain too few adequate venous channels for the blood to leave the limb. The importance of preservation of the profunda femoris branch and the common femoral vein cannot be over-emphasized, when the interruption of the long saphenous vein and the superficial femoral vein is done. The level of the latter interruption under these cir-

cumstances must always be distal to the profunda femoris branch (Fig. 5).

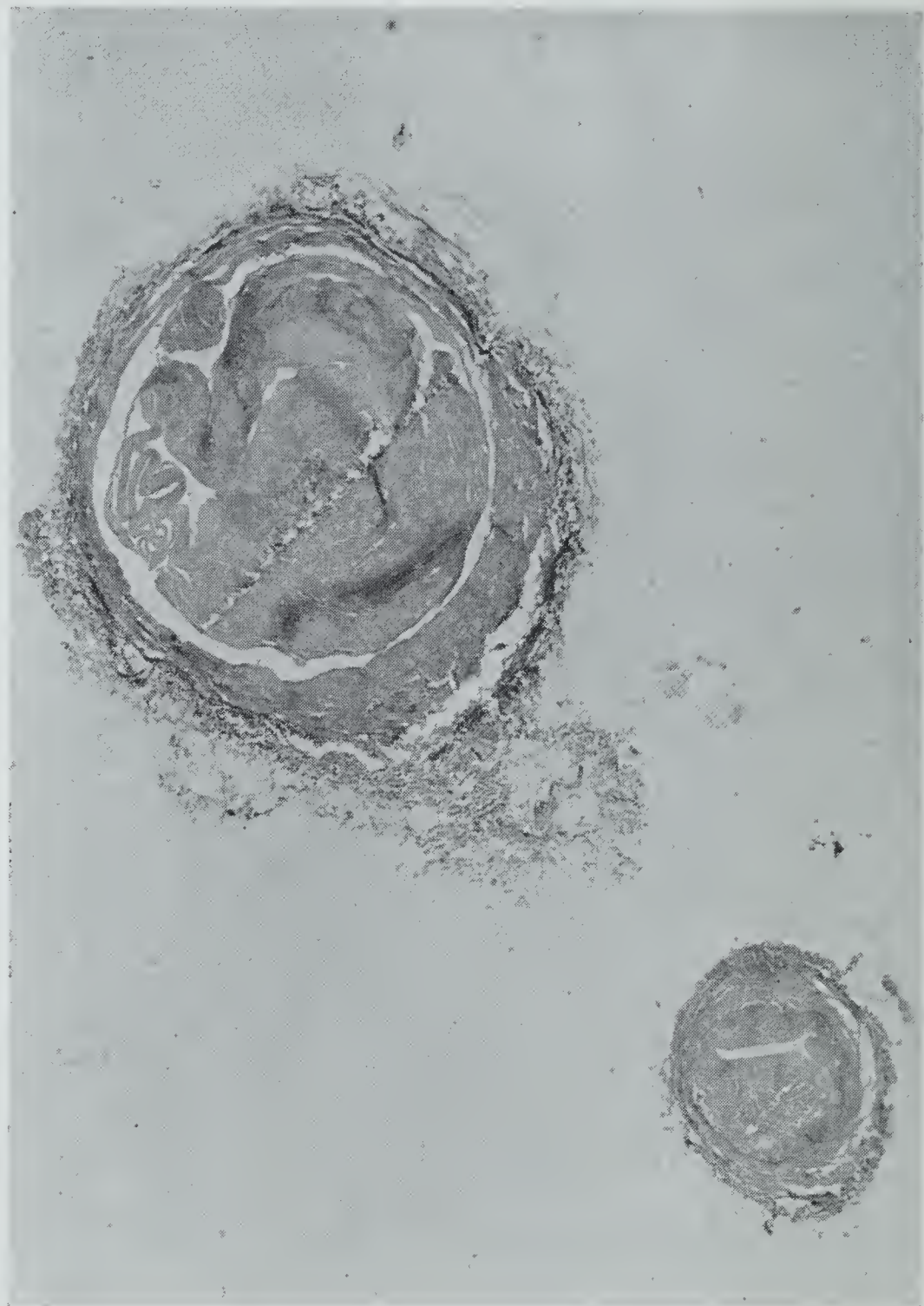


Fig. 5: Microphotograph of a segment of superficial femoral vein, showing canalization and fibrosis of vein; from patient who carried thrombophlebitis 31 years. The thrombophlebitis followed childbirth and she has had two operations to the superficial vein prior to coming to us for surgery.

Following the interruption of the superficial femoral, the long saphenous vein pressure is taken. If the pressure exceeds 30 cm. water, Linton¹³ advises postponing interruption and stripping vein until a later date on account of possible hemorrhage occurring along the bed of the removed vein. The interruption and excision of the internal saphenous vein is made flush with the foramen ovale, including its tributaries about the foramen and stripping the internal saphenous vein from groin to below the knee. Next step is the removal of the internal saphenous vein and tributaries, interruption of communicating veins beneath the fascia on the inner and posterior aspects of the limb, and removal of the external saphenous vein, with excision of a strip of deep fascia from the posterior leg. The above procedure is carried

13. Linton, R. R., and Hardy, I. B., Jr.: Postthrombotic Syndrome of the Lower Extremity, *Surgery* 24: 452-468, September 1948.

out through a medially placed incision of the leg, extending from tibial tubercle downward to and beyond the posterior internal malleoli. The incision extends through the skin and deep fascia along its entire course. To avoid contamination of the skin wound, gauze drapes are sutured to skin edge similar to the protection given an abdominal wound. To avoid flooding of the wound and loss of blood as the dilated venous channels are incised, the patient is placed in a Trendelenburg position. Such position of the patient's table will not interfere with the operative procedure. The skin and subcutaneous tissue flaps are reflected for removal of the leg portion of the internal saphenous vein and its tributaries. The defective communicative branches of the posterior tibial vein are found beneath the fascia as the incision is carried through the fascia throughout the length of the skin incision. Here the interruption of the communicative branches is made. The anatomic arrangement of the communicative branches has been well demonstrated by Sherman.¹⁴ In many instances the communicative veins may branch or fork before passing through the deep fascia. If the latter is interrupted anterior to the fascia, the vein branch beneath the fascia will not be sacrificed and will continue to feed the ulcer area. In the majority of the defective communicative veins, associated with ulceration, stasis dermatitis will be found in the lower medial third of the leg above and posterior to the internal malleoli. Here the only support the communicative vessels have is that offered by the flexor tendons; whereas, in the upper leg, the vessels are supported by the calf muscles. Not infrequently large defective communicative veins will be found along the posterior surface of the tibia in the upper leg, communicating with the tributaries of the internal saphenous vein. Therefore it is important in all cases to employ a long, subfascial incision from tibial tubercle to the ankle, rather than a short incision in the lower leg, as advocated by Cockett,¹⁵ for interruption of communicative veins. Instead of exposing the internal malleoli by retracting the anterior skin wound to encourage slough of the skin flaps, the distal end of the internal saphenous vein which extends onto the dorsum of the foot is removed with stripper, through a counter-skin opening at the mid-dorsum of the foot. In many cases the saphenous nerve will be found adherent to the saphenous vein; oftentimes requiring its removal, but only rarely following its removal has the resulting anesthesia along the anterior surface of leg given patients much concern since they are so relieved of the ulceration and pain of the leg.

The posterior communicative vein interruption is carried out by separating the deep fascia by anterior retraction of the gastrocnemius and soleus muscles, exposing many large communicative branches. Such dissection is carried posteriorly to the level of the bed of the external or short saphenous vein. At this point, incision is made through the deep fascia along the course of the short saphenous vein with its accompanying sural nerve. To avoid trauma to the nerve it is dissected away from the vein and the vein is removed from the opposite and posterior to the external malleoli to the upper leg or popliteal area where it unites with the popliteal vein. To aid lymphatic drainage of the leg a good margin of fascia opposite the removed external saphenous vein is excised. This will throw the subcutaneous tissues of the posterior leg in proximity to the calf muscles to aid lymphatic drainage. Two medium-sized rubber Penrose drains are placed beneath the fascia and allowed to emerge through a counter skin incision along the posterior calf region. Closure of the anterior incision of the fascia is made by using 00 plain interrupted catgut sutures. Avoid employing non-absorbable sutures (silk or cotton) in the closure of the fascia that may require their removal for wound repair in case infection of wound occurs following surgery. Closure of skin is with interrupted 000 silk.

The leg dressing should be firm, placing two long strips of gauze along the skin incision, reinforced with a 5-yard roll of gauze around the leg, followed with Ace bandage support, from base of toes, including the heel, to above knee, and application of plaster cast to limb from base of toes to mid-thigh. Such dressing is to be worn for two weeks, when the cast is removed, including dressing and sutures. Occasionally the leg wound will fail to heal per primam, necessitating further wound care. The limb is supported with Ace bandage or modified boot and to be worn for two or three months. Patient is instructed, after ambulation is begun, to avoid flexing the leg at the knee for several weeks after operation to avoid interference of venous return of leg.

CASE REPORT

Mrs. J. B., age 50, reported on July 12, 1951 for postphlebitic limb with ulceration, left. Treatment was directed to curing ulcer and operation was carried out Sept. 17, 1951 in the standard manner described herein. The attached photographs (Figs. 6 and 7) show leg before operation and postoperative film, made January 4, 1954.

SUMMARY

The results following the surgical management of postphlebitic leg ulcer are largely based on the following points: (1) Thorough knowledge of the anatomy of the venous system of the lower limbs;

14. Sherman, S. R.: Varicose Veins, *Ann. Surg.* 130: 218-232, August 1949.

15. Cockett, F. B.: The Pathology and Treatment of Venous Ulcers, *Brit. J. Surg.* 43: 260-278, November 1955.



Fig. 6: Mrs. J. B. Leg before operation.



Fig. 7: Mrs. J. B. Leg after operation.

(2) understanding of the damage thrombophlebitis of the deep veins of the leg has on the venous flow and damage to the capillary bed and lymphatics; (3) the patho-physiological changes following milk-leg infections; and (4) a well-organized surgical program will give the best results in the care of the ulcer and other thrombotic changes following thrombophlebitis of the deep veins of the lower limb.

918 S. 20th Street.

Executives Show Less Vascular Disease Than Nonexecutives—Being an executive doesn't necessarily mean that you have high blood pressure or hardening of the arteries.

In fact, a recent five-year study of more than 2,000 individuals showed that executives had less hypertension and arteriosclerosis than did nonexecutive office workers of comparable sex, age, and work environment.

The study, reported in the June 19 Journal of the American Medical Association, was made by Dr. Richard E. Lee, New York Hospital-Cornell University Medical College, and Dr. Ralph E. Schneider, New York University College of Medicine.

The authors defined an executive as a person dealing with policy formation and implementation. The 1,171 male executives studied ranged from "top executives" (board directors, corporate officers, and general managers) to "minor executives" (division heads, auditors, and others of lesser rank than department heads).

Also studied were 1,203 nonexecutives, of whom 563 were women. They included stenographers, secretaries, clerks, assistant supervisors, and supervisors.

Of the executives, 12.3 per cent had some type of high blood pressure, as did 15 per cent of the male nonexecutives over 40 years of age. Arteriosclerosis of some type was found in 7.8 per cent of the executives and 15.4 per cent of the nonexecutives.

No significant relationship was found between the incidence of heart attacks and the level of business responsibility, the authors said. Heart attacks occurred in 3.7 per cent of executives and 5.1 per cent of the non-executive males over 40.

Among the reasons suggested by the doctors for the less than expected rate of executive vascular disease is that these men have learned the value of "escape valves" and the need for outside avenues of expression, such as hobbies.

"The lack of an increased incidence of hypertension among executives as a 'stress' phenomenon further emphasizes the importance of reaction by the individual to his environment rather than the physical and intellectual demands of that environment per se," the authors said.

"Stress is a relative and a subjective matter. When the inherent capacities of the individual to perform fail to measure up to the demands of his world, the harmonious balance between the subject and his environment is disrupted and a stress reaction takes place," they continued.

This occurs, they added, "regardless of whether the factor in the external environment is a speedily approaching deadline for a frantic technical assistant or the threatened failure of a large business venture for the director in charge."

In conclusion, the authors wondered if "at least a part of the recent emphasis on dangers of executive life to the vascular system may be based more on knowledge of the exceptions rather than of the rule."

CHOLEDOCHODUODENAL FISTULA

C. F. ZUKOSKI, M. D.

and

R. A. DILLARD, M. D.

Birmingham, Alabama

Two patients with choledochoduodenal fistula have been treated at the Birmingham Veterans Administration Hospital since it opened in 1953. Both of these were seen in September 1957. These two cases are responsible for our interest in this relatively rare type of spontaneous internal biliary fistula.

INCIDENCE OF SPONTANEOUS INTERNAL BILIARY FISTULAS

The incidence of spontaneous internal biliary fistula in a compilation of 36,000 autopsies was 74.^{8,13,20} Hicken and Coray found that about 1 in 25 patients operated on for gallbladder disease would have some variety of internal biliary fistula.⁹ In two series of cases reporting patients operated on for the first time for gallbladder disease from 1945 to 1950 inclusive, 84 such cases were found in 9,716 operations,¹⁹ and the other reported 78 cases in 2,613 operations.²² The older series of cases seem to show a higher incidence of this lesion than the more recent ones, and perhaps this is due to improved handling of patients with gallbladder disease, notably more patients operated on for "silent" stones.

TYPES OF FISTULAS

Gastro-intestino-biliary fistulas are almost always a complication of some previously existing pathology in the gallbladder, choledochus, duodenum, stomach or colon, though one case of a congenital choledochoduodenal fistula is reported.² Cholelithiasis was present in 90%, peptic ulcer in 6%,⁹ and primary inflammation and various carcinomas account for the remainder.^{3,19} In a compilation of 819 cases of internal biliary fistula proven at surgery, 51% (44-57%) were cholecystoduodenal, 21% (5-37%) cholecysto-colic, 19% choledochoduodenal, and 9% "in locations other than one of these three sites"; 6% were due to peptic ulcer, chiefly involving the choledochus.¹² Biliary fistulas have been reported connecting to all parts of the gastro-intestinal tract, bronchi and pleuri, urinary system, all of female reproductive organs, and to any two of the above organs.¹⁰

Dr. Zukoski is Assistant Chief of Surgical Service, Veterans Administration Hospital and Instructor in Surgery, Medical College of Alabama, Birmingham, Alabama.

Dr. Dillard is Chief, Surgical Service, Veterans Administration Hospital and Instructor in Surgery, Medical College of Alabama, Birmingham, Alabama.

The authors wish to thank Dr. Champ Lyons, Professor and Chairman, Department of Surgery, Medical College of Alabama, for his suggestions in preparing this paper.

INCIDENCE AND ETIOLOGY OF CHOLEDOCHODUODENAL FISTULAS

Spontaneous biliary fistulas involving the choledochus and the duodenum were found to be present in 3 of the 84 cases of fistula found in 9,716 biliary operations.¹⁹ In an earlier report from the same clinic only 1 was present in 153 biliary fistulas.¹⁵

The 24 cases of choledochoduodenal fistulas listed by Garland and Brown¹¹ show that 19 had their origin from peptic ulcer, 3 from cholelithiasis, 1 infection, and 1 unknown. Hutchings, Wheeler, and Puestow state that 80% of choledochoduodenal fistulas are due to duodenal ulcer. These authors have compiled 29 such case reports in the American literature, with one additional case being mentioned in the discussion by Dr. A. M. Large.⁴ An additional 4 such cases have been reported: 3 at Mayo Clinic¹⁹ and 1 by Zatzkin et al.³ This last case was in a 72-year old female who had demonstrated x-ray gallstones and barium in the common duct and "evidence of a perforated duodenal ulcer." It is probably true that the paucity of cases reported gives a false impression of the rarity of this type of fistula and that it occurs more frequently than indicated. Internal biliary fistulas, whether a complication of biliary disease or of peptic ulcer, carry an increased morbidity and mortality as evidenced by a 41% postoperative mortality in the series reported in 1950 by Byrne at Boston City Hospital. In a recent series reported by Glenn and Mannix, 4 deaths in 30 patients followed operation for biliary enteric fistula or an associated complication among patients without cancer.²³

The following two case reports will demonstrate one due to duodenal ulcer and one due to cholelithiasis.

Case No. 1 (E. H.): A 63-year old colored male was admitted to the Medical Service of the Birmingham Veterans Administration Hospital on 8/11/57 with a chief complaint of upper abdominal cramping pain of one week's duration. He stated that he had had epigastric burning pain relieved by alkali for 20 years. One week prior to admission he had become nauseated and vomited coffee-ground material. He had an appendectomy 25 years before. He had "a stroke" five years prior to admission.

Physical examination was negative except for generalized voluntary guarding on palpation of the abdomen and moderate epigastric tenderness chiefly to the right of the midline. No organs or

masses were palpable. There was a right lower quadrant scar. A right inguinal hernia and hydrocele were present. Neurologic examination showed sustained ankle clonus on the left with no Babinski sign, deep tendon reflexes very hyperactive on the left, no abdominal reflexes, some decrease in pain, and vibratory sensations in the left lower extremity.

Laboratory findings were within normal limits except for a white cell count of 13,300 with 83% neutrophils, prothrombin time of 60%, hematocrit of 35, BSP 17% retention, and BUN of 27.5 mgm. %. A 12-hour night secretion gave 39 Meq/L of free acid in a volume of 1300 cc. Liver function studies other than the BSP were normal. PSP excretion was reduced. The initial flat and upright abdominal films were read as within normal limits, and the chest film showed slight apical thickening on the right.

Course in Hospital: The patient continued to have epigastric pain and tenderness during this work-up period and vomited occasionally. A G. I. series on 8/21/57 revealed a duodenal bulb deformity and a choledochoduodenal fistula with reflux of barium into the biliary tree (Fig. 1). IVP, bar-

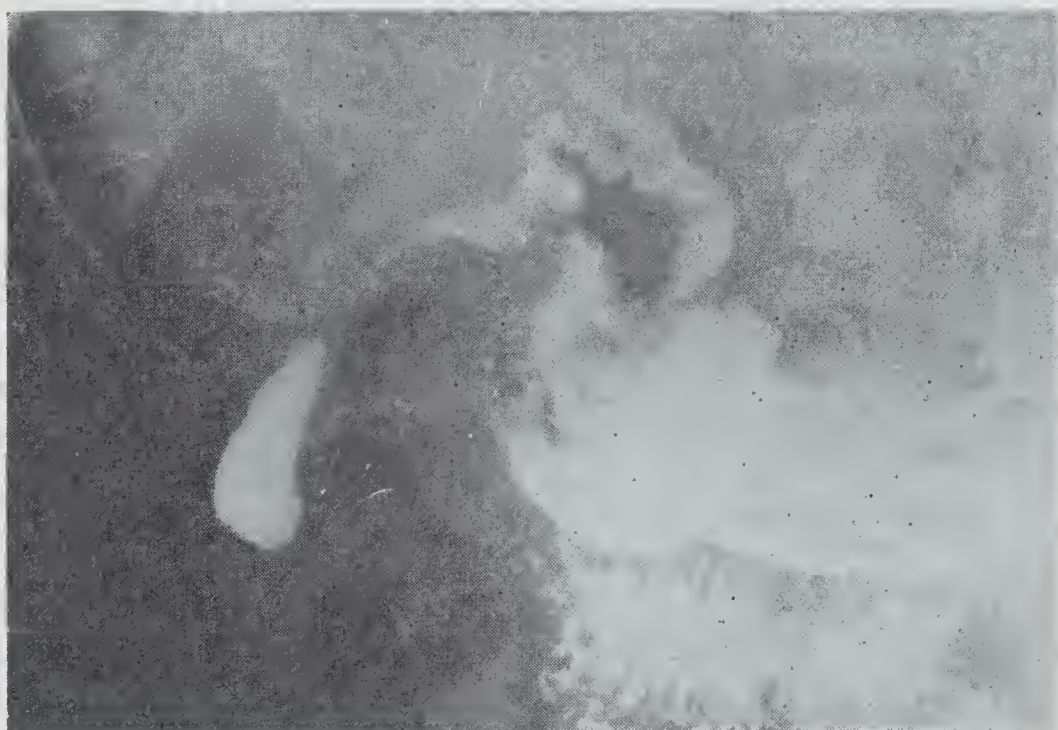


Fig. 1 (E. H.): Upper G. I. series outlining choledochoduodenal fistula and biliary tree.

ium enema, and gallbladder series were normal. In reviewing the original abdominal x-rays one could see the outline of the gallbladder, the common duct, and the pancreatic and cystic ducts, which were well outlined with air (Fig. 2).

A surgical consultation was obtained because the patient continued to vomit and became distended. Before he was seen by the surgeon, he had vomited 400 cc. of clear gastric contents with some relief. The abdomen measured 33 inches at the umbilicus. A Levin tube was passed and 1950 cc. of "pea soup" material aspirated. The abdomen measured 29 inches following this. The impression was that this was duodenal ulcer with pyloric obstruction versus neoplasm with pyloric obstruction.



Fig. 2 (E. H.): Showing air in right and left hepatic ducts and gallbladder.

On continuous nasogastric suction and atropine he became asymptomatic and four days later a small plastic tube slipped into the duodenum which allowed tube feedings while gastric suction was continued. He was then given liquids by mouth, and by checking for gastric residual it was determined that he could tolerate oral feedings. While on the Surgical Service it was initially planned to treat this duodenal ulcer for six weeks and then operate but the patient had never had a good trial of medical therapy and did respond well. He had no bouts of cholangitis. The BUN remained elevated and PSP excretion poor. It was felt that he had moderately advanced arteriolar nephrosclerosis and that major abdominal surgery should be avoided. A herniorrhaphy and hydrocelectomy were done on the left under spinal anesthesia.

His postoperative course was uneventful, and he remains asymptomatic on a 6-meal bland diet and Probanthine 15 mgm. three times a day and at bedtime. However, the fistula remained open at the end of six weeks of ulcer therapy as evi-

denced by air visible in the biliary tree on x-ray examination.

It is felt that this conservative management should be followed unless ulcer symptoms return or evidence of cholangitis is documented.

Case No. 2 (G. W.): This 64-year old white male was referred to the Birmingham Veterans Administration Hospital for a lesion in the left mid-lung field. In 1945 a lesion was removed from the vocal cord and dropped, being apparently swallowed or aspirated. With no histologic diagnosis being possible he was given deep x-ray therapy to the neck for ten days.

In 1951 he was given mercurials and digitalis for congestive heart failure presumably on a hypertensive basis. In 1952 he was given nitroglycerine because of chest pain, with relief. In 1955 and 1956 he was treated for jaundice. Since that time he had intolerance to fatty foods chiefly manifested by diarrhea and occasionally severe cramping abdominal pains.

Physical examination showed a well-developed, poorly-nourished male in no acute distress. The liver was palpable 10 cm. below the costal margin, firm, rounded edge, and only slightly tender. Chest examination was normal.

CBC, urinalysis, BUN, fasting blood sugar, total protein, A/G ratio, Van den Bergh, and thymol turbidity were within normal limits. Prothrombin time 40%, alkaline phosphatase 8.7 B. L. units.

Course in Hospital: Work-up revealed malignant cells on Pap smears of sputum, EKG abnormal due to left bundle branch block and left axis deviation. X-rays showed an oval density in the left mid-lung field. Bronchoscopy was negative. A left supraclavicular fat pad excision was negative. During this procedure under local anesthesia the patient had a small stroke with left hemiparesis. He was treated on the Medical Service with anticoagulants and developed hematuria but gradually recovered from the cerebral vascular accident. An I. V. cholangiogram showed no abnormalities other than slight common duct dilatation. He then developed acute cholecystitis with jaundice. This responded to conservative management, but it was decided that the common duct obstruction must be relieved and liver metastasis ruled out before subjecting this patient to thoracotomy. On 9/23/57 under spinal anesthesia the common duct was explored. He was found to have a choledochoduodenal fistula, which was opened as the duodenum was being reflected off of the common duct (Fig. 3). The duodenum was closed and the enlarged common duct explored through the small fistulous opening which was 2 cm. below the cystic duct. Many small stones were found in the common duct, and the gallbladder was removed. A 4 mm. probe passed into the duodenum. A long

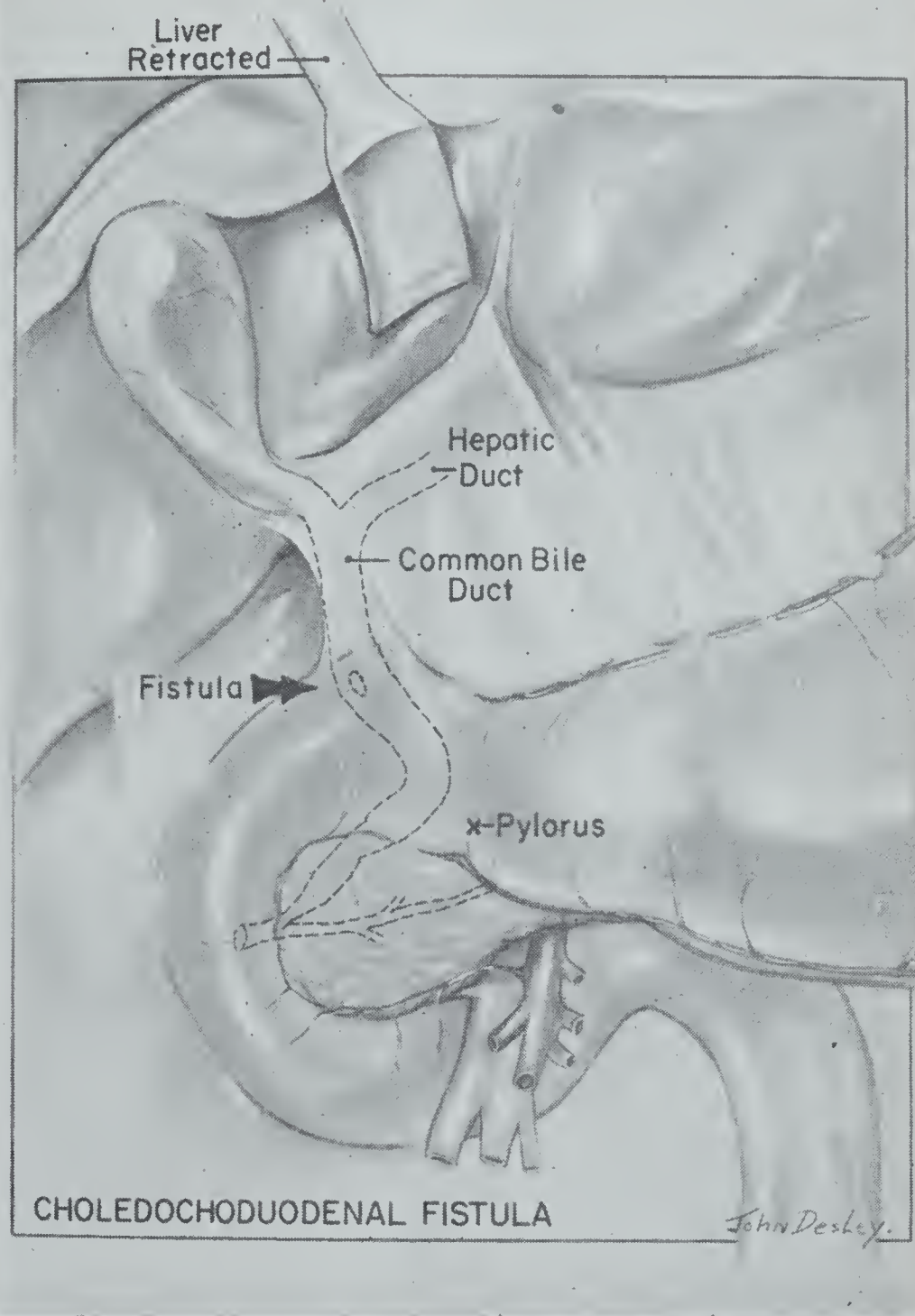


Fig. 3 (G. W.): Choledochoduodenal fistula as seen at operation.

limb T-tube was put in place with the use of a duodenotomy and an ampuloplasty. The edges of the choledochal fistula were freshened and then closed around the long limb T-tube. It was assumed that this fistula was due to cholelithiasis since this patient did not have a peptic ulcer. The patient had an uneventful postoperative course, and four weeks later a left upper lobectomy was done. He was given four doses of HN_2 0.1 mgm./Kg. postoperatively and on the 6th postoperative day developed a pneumonitis of the left lower lobe. He did not appear critically ill and did well until early morning of the 10th postoperative day, when he got out of bed to use the commode, returned to bed, and suddenly expired.

Autopsy revealed some consolidation of the superior segment of the left lower lobe, and severe atherosclerosis of the coronary vessels with evidence of an old myocardial infarction. The duodenum was well healed, and there was no evidence of common duct stricture or acute biliary cirrhosis.

DIAGNOSIS

The diagnosis of these choledochoduodenal fistulas has usually been made in the diagnostic

work-up of a patient with long-standing recurrent peptic ulcer symptoms (average 11 years)⁴ or in patients whose histories are suggestive of cholelithiasis. X-rays of this area which demonstrate air in the biliary ducts and gallbladder are diagnostic of some type of internal biliary fistula except where the ampulla of Vater is incompetent.^{1,14} In 30 cases of choledochoduodenal fistulas due to ulcer the fistula was demonstrated in all cases but one.⁴ In the three cases of Epperson and Walters¹⁹ and our ulcer case, it was shown by upper gastrointestinal series.

SYMPTOMS

The symptoms that the patients with choledochoduodenal fistula have are due to the underlying process (ulcer or cholelithiasis) in most cases, but a few of the patients with peptic ulcers do develop cholangitis.^{4,9} In three patients who were known to have had a choledochoduodenal fistula (on the basis of ulcer) by x-ray for 1-3 years, no cholangitis developed.⁴ In the cases of this fistula associated with choledocholithiasis,^{7,13,18} as well as other types of internal biliary fistulas,^{1,9,17} cholangitis is not uncommon.

A reason that the choledochoduodenal fistula arising from an ulcer is not associated more frequently with cholangitis might be that the common duct is constantly being flushed with regurgitated duodenal contents and stasis does not exist. As long as the fistula has an adequate opening, no cholangitis will develop.^{16,17} In cholecystoduodenal and cholecystocolic fistulas, the material that enters the biliary tree tends to remain in the gallbladder and common duct, and this stasis may be the primary causative factor in the cholangitis produced.

AGE, SEX

In 30 case reports of choledochoduodenal fistulas due to ulcer disease, all were males.⁴ Our two cases were males (one ulcer and one due to cholelithiasis). In the literature several cases of choledochoduodenal fistulas are mentioned in females. The cases mentioned are not too complete in outline, but three probably were associated with cholelithiasis (one associated with the duodenal deformity of an ulcer)^{8,13,18} and one due to an adenocarcinoma of probable biliary duct origin demonstrated at operation.¹² The average age of these four cases and our two cases was 48 (24-85).

THERAPY

From this discussion of choledochoduodenal fistulas, the importance of making the correct etiologic diagnosis is great as far as the therapy is concerned. The operation of choice in cases that are associated with cholelithiasis is choledochotomy to ascertain that choledochus and ampulla of Vater are patent, cholecystectomy, and closure of the

duodenum. It is felt that if the distal portion of the choledochus is narrowed or the ampulla does not admit a probe easily, the use of a long limb T-tube into the duodenum with an ampullopasty may be indicated.

In the cases of choledochoduodenal fistulas caused by penetrating peptic ulcer the indication for operation is that of the underlying ulcer disease: pyloric obstruction, hemorrhage, perforation, or intractable pain.^{1,2,19} Cholangitis in association with choledochoduodenal fistula secondary to peptic ulcer is another indication for operative intervention, though operative intervention to prevent the occurrence of cholangitis is not felt to be indicated. The operation of choice in management of the complicated ulcer associated with a choledochoduodenal fistula is a subtotal gastrectomy, leaving the ulcer and fistula undisturbed in closing the duodenum.^{1,2} In attempting to leave fistula open, the Bancroft modification of the duodenal stump is advocated by some,^{4,5} though other authors have advocated the transplantation of the choledochus into the duodenum or jejunum.^{7,9}

SUMMARY

1. A brief review of incidence of spontaneous internal biliary fistula is presented, indicating the common pathological conditions with which these fistulas are always associated. Choledochoduodenal fistulas are discussed in detail.

2. The clinical manifestations of these fistulas is that of the underlying pathological etiologic factor. Age and sex factors are discussed.

3. Two case reports of choledochoduodenal fistulas are presented, one on the basis of penetrating duodenal ulcer and the other due to choledocholithiasis.

4. The surgical management of choledochoduodenal fistulas is discussed.

BIBLIOGRAPHY

1. Jordan, P. H., Jr., and Stirret, L. A.: Treatment of Spontaneous Internal Biliary Fistula Caused by Duodenal Ulcer, *Am. J. Surg.* 91: 307-313 (March) 1956.
2. Walker, G. L., and Large, A. M.: Choledochoduodenal Fistula: Its Surgical Management, *Ann. Surg.* 139: 510-516, 1954.
3. Yon, J. L., and Bell, L. G.: Choledochoduodenal Fistulae Secondary to Duodenal Ulcer, *A. M. A. Arch. Surg.* 66: 260-264, 1953.
4. Hutchings, V. Z.; Wheeler, J. R., and Puestow, C. B.: Choledochoduodenal Fistula Complicating Duodenal Ulcer: A Report of Five Cases and Review of the Literature, *Arch. Surg.* 73: 598-605 (Oct.) 1956.
5. Macumber, H. H., and Stoll, R. G.: Spontaneous Internal Biliary (Choledochoduodenal) Fistula, Report of Case, *Gastroenterology* 27: 488-490 (Oct.) 1954.
6. Craighead, C. C., and St. Raymond, A. H., Jr.: Duodenal Fistula with Special Reference to Choledochoduodenal Fistula Complicating Duodenal Ulcer, *Am. J. Surg.* 87: 523-533, 1954.

7. Zatzkin, H. R.; Tugendhaft, R. I., and Curran, H. P.: Roentgen Diagnosis of Spontaneous Internal Biliary Fistulas and Gallstone Ileus, Surg., Gynec. & Obst. 102: 234-238 (Feb.) 1956.
8. Davison M., and Aries, L. J.: Spontaneous Chole-
dochogastrostomy and Cholecystogastrostomy, Ann.
Surg. 107: 229-237 (Feb.) 1938.
9. Hicken, N. F., and Coray, Q. B.: Spontaneous Gas-
trointestinal Biliary Fistulas, Surg., Gynec. and Obst.
82: 723-730 (June) 1946.
10. Eliason, E. L., and Stevens, L. W.: Spontaneous
Internal Biliary Fistula, Am. J. Surg. 51: 387-392 (Feb.)
1941.
11. Garland, L. H., and Brown, J. M.: Roentgen Diag-
nosis of Spontaneous Internal Fistulae, Especially Those
Involving the Common Duct, Radiology 38: 154-159
(Feb.) 1942.
12. Waggoner, C. M., and LeMone, D. V.: Clinical and
Roentgen Aspects of Internal Biliary Fistulas, Radiology
53: 31-41 (July) 1949.
13. Borman, C. N., and Rigler, L. G.: Spontaneous
Internal Biliary Fistula and Gallstone Obstruction, Sur-
gery 1: 349-378 (March) 1937.
14. Major J. Weinberger, and Capt. A. Rosenthal:
Choledochoduodenal Fistula, Am. J. Roentgenol. 53:
470-473 (May) 1945.
15. Judd, E. S., and Burden, V. G.: Internal Biliary
Fistula, Ann. Surg. 81: 305-312, 1925.
16. Bachrack, W. H., and Fogelson, S. J.: Choledocho-
jejunostomy, Surgery 6: 882-892 (Dec.) 1939.
17. Report from "Our Regular Correspondent,"
Vienna, February 9, 1935, Concerning Remarks of Dr.
Finsterer, J. A. M. A. 104: 1353-1354, 1939.
18. Taylor, W. B.: Internal Biliary Fistulae, Canad.
M. A. J. 47: 332-336 (Oct.) 1942.
19. Epperson, D. P., and Walters, W.: Spontaneous
Internal Biliary Fistulas, Proc. Staff Meet., Mayo Clin.
28: 353-360, 1953.
20. Roth, Schroeder, and Schloth, quoted by Robson,
A. W. M., Brit. M. J. 1: 1050-1054, 1909.
21. Cogbill, C. L., and Roth, H. P.: Choledochoduode-
nal Fistula: Report of Two Cases Due to Duodenal Ulcer,
Am. Surg. 19: 480-488 (May) 1953.
22. Mirizzi, quoted by Epperson, D. P., and Walters,
W., Proc. Staff Meet., Mayo Clin. 28: 353-360, 1953.
23. Glenn, F., and Mannix, H.: Biliary Enteric Fistula,
Surg., Gynec. and Obst. 105: 693-705 (Dec.) 1957.

In 1957, 1,330 Americans were killed in train-car crashes.
53,000 Americans were injured in car-bicycle mishaps
in 1957.

A total of 38,700 Americans were killed in 1957 traffic
accidents.

In 1957, 2,525,000 Americans were injured in traffic
accidents.

Speeding was blamed for 13,200 deaths on U. S. high-
ways in 1957.

In 1957, 7,500 pedestrians were killed by autos in the
U. S.

Jaywalking was costly in the U. S. last year—2,600 were
killed.

Treatment for Port-Wine Birthmarks Described—
Treating port-wine birthmarks with an electric needle
brought "considerable improvement," an Army physi-
cian reports.

Writing in the May Archives of Dermatology, pub-
lished by the American Medical Association, Major Darl
E. Vander Ploeg, Madigan Army Hospital, Tacoma,
Wash., said he treated four patients with electrodesic-
cation.

While the improvement in appearance was not 100
per cent, the improvement in the morale of the patients
was "remarkable," he said.

Port-wine birthmarks, sometimes called strawberry
or raspberry marks, are made up of elevated red growths
composed of aggregations of small blood vessels. They
occur at birth or shortly after.

Patients with such marks are often told that there
is no successful treatment for the condition. It is usually
not responsive to x-rays, radium therapy, or cryother-
apy, Dr. Vander Ploeg said.

In electrodesiccation, the tissue is dehydrated by the
use of a high frequency current through a pointed needle
electrode.

Dr. Vander Ploeg said he treats a small test area
initially and then waits six weeks to estimate the degree
of expected improvement.

Then other sections are treated.

Caution Is Advised in Use of Preoperative Narcotics—
Two Pennsylvania physicians have called for a more
objective approach in the use of narcotics for sedation
before surgery.

Writing in the May 24 Journal of the American Medi-
cal Association, Drs. James E. Eckenhoff and Martin
Helrich, both of Philadelphia, said "Preoperative medi-
cation should be tailored to meet the needs of the pa-
tient and his operation."

Their study was undertaken to compare the effective-
ness of three commonly used narcotics—morphine,
meperidine, and alphaprodine—with that of secobarbi-
tal, and a saline solution.

Results of the study on 1,400 surgical patients indicate
that narcotics should be used as preoperative sedatives
only "with a specific objective in mind and with an
awareness of the hazards inherent in their use," the doc-
tors said.

Preoperative medication is intended to reduce fear
and apprehension and produce a relaxed and tranquil
patient. It is also important that the drugs involved
leave the patient with a minimum of side-effects.

Narcotics produced more drowsiness or sleep in pa-
tients than did the barbiturate. They also produced a
higher degree of apprehension and many undesirable
side-effects such as dizziness, nausea, and vomiting.
These side-effects were found to a much lesser degree
when using secobarbital or the solution.

In addition to reducing the amount of side-effects,
the doctors said "secobarbital led to a higher portion of
calm, carefree, yet alert patients than did the narcotics."

Of the total number of patients studied, 64 per cent
showed no signs of preoperative apprehension. This
figure was raised to 79 per cent with the use of seco-
barbital.

The administering of preoperative drugs did not
appear to influence the maintenance of anesthesia dur-
ing surgery, except that respiratory depression was
more common where narcotics had been used.

During the postoperative period, it was noted that
those patients who had received narcotics tended to sleep
for a much greater length of time.



INTRAMUSCULAR IRON FOUND USEFUL IN IRON DEFICIENCY STATES

Advantages of intramuscular iron in the treatment of iron deficiency anemia were described by two physicians from Creighton University School of Medicine in a report in the May 1958 *American Journal of Medical Sciences*.

Drs. B. J. Koszewski and J. R. Walsh reported that an iron-dextran complex (Imferon, Lakeside) given intramuscularly was found to be nonirritating, relatively easily absorbed from the tissues, and effective as an erythropoietic agent in patients with anemias due to acute and chronic blood loss, post-gastrectomy dumping syndrome, multiple pregnancies and in essential iron deficiency anemia.

The advantage of iron-dextran over intravenously-administered iron was "the higher concentration of elemental iron in the preparation, which allows for the therapeutic doses to be given in a short period of time, and the intramuscular route of application. The schedule can be maintained on 250 mg. of iron daily without fear of toxic reactions."

The physicians note in their introduction that "while most patients respond well to peroral iron medication, some are refractory to, or intolerant of, this route of treatment and require parenteral injections."

Their study shows "satisfactory clinical results and good hematologic response were obtained in 18 patients with iron deficiency anemia given intramuscular injections of the iron-dextran complex.

"Daily doses varied between 100 and 250 mg. Total dose consisted of 250 mg. of iron for each gm. per 100 ml. of hemoglobin deficiency. On this schedule no significant local or systemic toxic reactions were encountered."

Clinical improvement in the 18 patients "was evident after four to five days and the symptoms of weakness, dyspnea, palpitations, loss of appetite, and dyspepsia were progressively relieved. The hemoglobin and erythrocyte counts increased and the mean corpuscular hemoglobin concentration became normal. Progressive and normal blood

Editorials

values were achieved as a rule in the period of 2 to 3 months." In three subjects "the source of bleeding could not be eliminated and the patients again became anemic after initial improvement."

The physicians advise that parenteral iron therapy is indicated for patients who: 1) show poor iron absorption, 2) have gastrointestinal disorders which may be aggravated by oral medication, 3) do not tolerate iron by mouth, and 4) need replacement of iron stores in a short period of time. Five of the patients in the study "did not respond to oral medication and several others had been unable to tolerate iron by mouth because of gastrointestinal disorders."

The physicians also report that in proving refractoriness of anemia to iron the parenteral therapy is superior to the use of oral iron because "the incorporated iron is fully absorbed and lack of response will always indicate improper diagnosis if the continued loss of blood can be excluded."

"Parenteral iron is also to be preferred to blood transfusions for correcting the effects of chronic blood loss. The risk of transfusion reaction is avoided, as well as the dangers of contamination and immunologic sensitization." In addition, iron stores are replenished, "a situation which cannot be corrected with transfused blood, since it contains a relatively small amount of iron."

The patients studied varied in age from nine to 79 years, averaging 56 years.

Dr. Koszewski is assistant professor of medicine, and Dr. Walsh is professor and director of the department of medicine at Creighton University School of Medicine, Omaha, Nebraska.

VOLUNTARY INSURANCE HELPS PAY HEALTH CARE BILL

More than \$4 billion—a rate of about \$11 million per day—of the nation's health care bill will be paid in 1958 through voluntary health insurance programs, according to the Health Insurance Council.

This estimate was made by the Council, based on the results of its annual survey of health insurance coverage in the United States for 1957. Benefit payments to help cover the cost of hospital, sur-

gical, and medical care last year amounted to \$3.5 billion, up 20.7% over 1956, and an all-time high.

The Council, in a projection of its 1957 figures on health insurance coverage in the United States, estimates that, as of June 1, 1958, some 123 million persons were protected against the cost of hospital expenses through voluntary health insurance programs, 111 million were covered for surgical expenses, 74 million had policies covering regular medical expenses, and 15 million were insured against major medical expenses. These figures, added the Council, mean that about 72% of the total U. S. civilian population today is protected by some form of voluntary health insurance.

The survey, which is made annually by the Health Insurance Council, and which covers the period from January 1 through December 31, 1957, is based upon reports of health insurance programs conducted by insurance companies, Blue Cross-Blue Shield and other health care plans.

The Council also reported that insurance companies in 1957 paid a total of \$740 million in benefits to people through loss of income insurance policies, which help replace income lost because of accident or sickness. This figure, added to the \$3.5 billion paid in other health benefits, would bring the total benefit payments for the year 1957 to \$4.2 billion paid under all voluntary health insurance programs.

Advances in all types of health insurance coverage were revealed in the Council report. During the year the number of people covered by hospital care insurance rose by more than 5 million over the year before, the number of people covered by surgical expense insurance increased nearly 8 million, and persons covered for regular medical expenses rose 7 million. In addition, loss of income policies afforded protection to over 1 million more people, while over 4 million more than in 1956—a gain of nearly 50%—were reported covered by major medical insurance policies.

At the end of 1957, the Council figures showed, up to 90% of those with hospital expense protection also had coverage for surgical expenses, while about 59% of those with hospital care insurance also had protection against regular medical expenses.

“The growth in both the number of people covered under plans designed to help pay hospital and doctor bills, and the payments received under these voluntary plans,” said the Council, “demonstrates the continued desire of the American people to insure themselves against costs incurred through accident and sickness. Increasingly, the public is providing itself with broader and more adequate health cost coverage.”

Some further highlights from the Council's survey at year's end are:

Hospital care insurance, to help pay for services in the hospital, remained the most popular form of health insurance in terms of number of people covered, with 70,192,000 persons covered by policies from insurance companies; 54,923,000 enrolled by Blue Cross-Blue Shield; and 4,947,000 protected by independent plans. Making allowance for people covered by more than one type of insuring organization, the Council reported that over 121.4 million persons were protected by hospital expense insurance, an increase of 4.7% over 1956.

Surgical expense insurance, which helps meet the cost of operations, was provided by insurance companies to 67,456,000 persons; 45,383,000 by Blue Cross-Blue Shield; and 5,597,000 by the other health care plans. Allowing for those with surgical costs, up 7.5% over the year before.

Regular medical expense insurance, providing for doctor visits for non-surgical care, accounted for 36,926,000 persons through Blue Cross-Blue Shield; while 33,240,000 were covered by insurance company programs; with 6,019,000 persons insured under independent plans. The unduplicated total number of persons having regular medical expense protection was 71.8 million, a gain of 10.7%.

Major medical expense insurance, which helps to absorb the cost of serious, or catastrophic illness, continued its dramatic upward trend at year's end, the survey further disclosed. Coverage through insurance companies under all forms of major medical programs rose by 49.4% to 13,262,000 persons. Of these, 12,428,000 had protection through group policies, with the remaining 834,000 insured through individual and family major medical expense policies.

In 1957, the Council report continued, 32,739,000 persons were covered by insurance company loss of income policies. The number of people who work where there is a formal sick leave payment arrangement would bring the total figure to 42,139,000 persons, 2.8% more than the year before, who are protected against loss of income.

The report, as presented by the Health Insurance Council, a federation of leading insurance associations representing over 90% of the health insurance in force through insurance companies, is the 12th annual review of the extent of voluntary health insurance coverage in the United States.

NEW BLOOD-CLOT DISSOLVING ENZYME

A new blood-clot dissolving enzyme promising effective control in thromboembolic diseases was described by three investigators at the June meeting of the American Medical Association in San Francisco.

The report on the enzyme fibrinolysin was given

by Drs. H. O. Singher, D. S. Pattison and R. V. Chapple, of the Ortho Research Foundation, Raritan, New Jersey.

They described its intravenous use in phlebotrombosis, vascular surgery, pulmonary embolism, cerebral thrombosis, and mesenteric thrombosis.

The new agent is currently under clinical trial. Preliminary studies indicate that its main advantages are: "the capability to induce and maintain a fibrinolytic level, the lack of hemorrhage in the face of this level, and the fact that it can be employed in the presence of anticoagulants," according to the investigators. They stress that "its mechanism is dissolution, not prevention of clot formation."

Major problems in treating clots are prevention of further extension of a clot and the dissolving of an existing clot or embolus, the investigators said. None of the anticoagulants are capable of dissolving a clot once it has been formed, although in many instances of minor clots, dissolution will be made by the body's own clot dissolving mechanism. "However, in most major thrombotic episodes, the fibrinolytic mechanisms are inadequate."

"The supplementation of these mechanisms has been the object of many years of research," according to the investigators.

The agent is prepared by activating plasminogen with streptokinase to form fibrinolysin or plasmin, the clot-dissolving substance.

The investigators described a study on 122 unselected cases with various conditions. They emphasized that no attempt was made to classify the patients treated on the basis of the duration of the clot before therapy was begun. "Early treatment is of paramount importance," they added. Results were classified as "excellent" in 78 cases, "fair" in 21, and "poor" in 23.

The investigators also described the enzyme's topical use in chronic poor healing wounds. In a wide range of wounds, including varicose ulcers and acute and chronic abscesses, this enzyme has proved effective in removing necrotic tissue, therefore promoting more rapid healing, they stated. Moreover, used topically, it has "not produced any side effects, allergic or pyrogenic reactions," they said. "Its simplicity of use and effectivity indicate a new vista of therapeutic regimens."

THE FAMILY DOCTOR

The average family doctor is a well-established physician in his forties who treats about 26 patients a day and spends more than eight hours a day on home and office calls, according to Health Information Foundation.

In its monthly statistical bulletin, *Progress in Health Services*, the Foundation released preliminary findings from a survey made in cooperation with the University of Chicago's National Opinion Research Center.

The study was intended primarily to find out what the American public thinks and does about health and health facilities. Interviews were conducted in the summer of 1955 with some 2,400 persons (representing a cross-section of the country's adult population) and with almost 500 physicians named by these persons as their family doctors.

"The persons interviewed are representative of those to whom the U. S. public first turns for medical care or advice," the Foundation said. About three-fourths of the family doctors surveyed by the N. O. R. C. were general practitioners, and almost all of them were in private practice. (By contrast, less than half of the total medical profession classifies itself as general practitioners, and about three-fourths of the profession is in private practice.)

These major survey findings were brought out in the Foundation report:

Most of the physicians in the sample were relatively young men. The largest group (over one-third) were in their forties, and doctors under 40 constituted an additional quarter of the total.

The average doctor interviewed spent about six hours a day on office calls and another two hours on house calls. Only one doctor in every fourteen made no house calls, and four out of five physicians were generally available for night and Sunday emergency calls.

About seven out of every eight family doctors were affiliated with one or more hospitals, and more than half of all physicians performed some free work in hospitals.

Commenting on the survey, George Bugbee, Foundation President, pointed out that four out of five persons interviewed by the N. O. R. C. said they had a family physician to whom they turned regularly when they were sick. Most patients, furthermore, "reported a very good opinion of the abilities of their family physicians, reflecting a confidence that is certainly related to success in patient care."

"Clearly," Mr. Bugbee continued, "the personal character of the relationship between patient and family physician has not given way to impersonal arrangements for physician services . . . Good medical care will always depend on how early during illness a physician is consulted and how readily his advice is accepted by those who ask for it. The public has unerringly perceived these basic facts. Otherwise people would not ask, as they do, that a family physician be the first called to home or

hospital in time of stress or whenever advice is needed for the maintenance of good health."

AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS

Plans have been made for the second annual convention of the American Association of Medical Assistants to be held at the Palmer House, Chicago, Illinois on October 31, November 1 and 2, 1958.

The American Association of Medical Assistants is made up of men and women employed as assistants in the offices of Doctors of Medicine. The Association was conceived in Kansas City, Kansas, during the fall of 1955 when interested persons from fifteen states met to make plans for a formal organization. The second meeting was held the following year in Milwaukee, Wisconsin at which time a constitution and by-laws were adopted and the Association formally set up. During this first official year a great deal of work was done and the first annual convention was held in San Francisco, California, in October 1957. Now, with a membership of nearly 6,000 representing seventeen states, and with the approval of state medical societies and the American Medical Association, this Association is well under way.

The purposes of the Association are stated as follows: To inspire its members to render honest, loyal and more efficient service to the profession and to the public which they serve. To strive at all times to cooperate with the medical profession in improving public relations. To render educational services for the self-improvement of its members and to stimulate a feeling of fellowship and cooperation among the societies. To encourage and assist all unorganized medical assistants in forming local and state societies. This Association is declared to be non-profit. It is not nor shall it ever become a trade union or collective bargaining agency.

Several states now offer fine educational courses with the cooperation of their colleges and universities which will help the assistant to become more valuable in the doctor's office. Physicians realize that the well-trained assistant is an asset to his profession and that these courses will relieve them of much of the time-consuming work of on-the-job training. The American Association plans to offer courses on a national level as soon as a suitable curriculum has been set up.

Membership in medical assistants societies throughout the country has provided an opportunity for the assistant to benefit from many fine lectures, workshops and seminars as a part of regular programs.

The American Association of Medical Assistants is now offering its members a comprehensive in-

surance program. This is a salary replacement (sickness and accident) plan with optional major hospital, nurse expense and surgical benefits.

It is to the advantage of the members of the medical profession to have their medical assistants affiliated with this organization.

The American Association of Medical Assistants would welcome the opportunity to give information concerning the organization and to assist with the formation of county and state societies. Inquiries may be addressed to Miss Hallie Cummins, R. R. L., Chairman of the Public Relations Committee, Medical Record Library, Caro State Hospital for Epileptics, Caro, Michigan.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

Applications for certification (American Board of Obstetrics and Gynecology), new and reopened, Part I, and requests for re-examination Part II, are now being accepted. Deadline date for receipt of all such applications is September 1, 1958. No applications can be accepted after that time.

The members of the American Board of Obstetrics and Gynecology wish to announce that at the recent final examinations for certification, the total of 280 certifications out of a group of 383 candidates examined.

It is expected that the new Bulletin of the American Board of Obstetrics and Gynecology will be available some time during the month of July. A copy of this booklet may be obtained by writing to the office of the secretary, Robert L. Faulkner, M. D., 2105 Adelbert Road, Cleveland 6, Ohio.

Birth Rate Slow-Down Caused by Recession—It appears that the current business recession is teaming up with the depression of the 1930s to force a slow-down in our booming birth rate.

The two slumps are partly to blame for the present decline in the number of marriages and births, according to an editorial in the June 21 Journal of the American Medical Association.

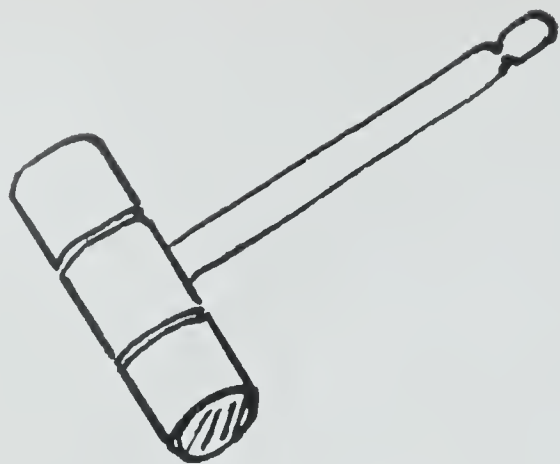
The editorial said, "These two declines suggest but do not prove that the end of the baby boom is in sight."

"Because of the comparatively small number of births during the 1930s, the number of youths attaining marriageable age continues to be fewer than can be expected during the 1960s," it explained.

While the number of births still exceeds 300,000 a month, the first quarter of 1958 saw a reduction of 7,000 births over a similar period a year ago.

This decline, according to the editorial, "is due in some measure to the business recession."

This may only be an interval in an irregular rise in births and marriages, it said, but it "should make one hesitate about predicting a population explosion in the United States."



President's Page

CHIROPRACTORS

The time has come for us to review our position toward chiropractors. No doctor in his right mind can ever accept chiropractors. The lay public cannot understand our attitude. The chiropractors do a great job at encouraging this misunderstanding. At every opportunity they insinuate the idea that we are doing quite well financially and are afraid that they will take our patients away from us. Against this rather down-to-earth argument it is difficult for us to explain that the basic concept that all diseases originate from disturbed nerve impulses caused by disarrangement of the vertebrae is in error. We may point out that they offer to treat pneumonia without penicillin. Now all of us, lay and medical alike, recognize penicillin and antibiotics as the great discoveries of our generation. These drugs have saved thousands of lives but to use them properly requires considerable knowledge and training. If you review the chiropractic texts in the sections devoted to pneumonia, you will find recommendations for certain adjustments of the spine but no mention of penicillin. In the same manner you will find treatments for diabetes with no mention of insulin. Since the basic concept of chiropractic flaunts these magnificent scientific achievements that mean so much to us in our practice, it is understandable why we cannot accept chiropractors, and I do not believe that we ever will.

In view of this basic fallacy in the chiropractic concept you might wonder why chiropractic has achieved the public acceptance that it has. In any discussion on the subject the public is quick to bring up this point and can offer cases as testimonial that chiropractic treatment has effected cures. We all recognize that many illnesses are of functional nervous origin and any healer who offers a cure, charges a fee, and goes through a laying on of hands can often effect a cure. I must confess that in the press of caring for the many critical illnesses such as pneumonia, coronary thrombosis and the like we may not give such functional illnesses sufficient attention and actually encourage the flight to the chiropractors. This, however, is not the major factor which leads patients to consult chiropractors. It is my firm conviction that most people go to chiropractors because they are

confronted with situations that they are not willing to face. In much the same way that some individuals, when confronted with an intolerable situation, may develop hysteria, amnesia or some other psychic blindfold, we find patients going to chiropractors who offer them a cure for a fee for a condition that the patients know deep in their thought processes is incurable. For example, we may make a diagnosis of incurable cancer, multiple sclerosis or the like. Our ethical and scientific training compels us to tell the patient or his family the truth and to say that we can give some relief but no cure. A certain number of patients cannot accept such facts and seek some escape. Perhaps a subconscious realization by the patient that when he goes to a chiropractor he is entering into a practice that is unsound and unreal and thereby becomes a party to it explains why chiropractors are rarely sued for damages. Certainly we all see results that are bad, results that would cost a licensed MD a pretty penny in a damage suit.

Whether the above discussions seem logical or illogical the chiropractors are with us and there is a considerable public acceptance. You find chiropractors elected to important public offices. Only recently in Jefferson County enough of a jury failed to recognize evidence that seemed crystal clear to bring about a mistrial. This is a story that has been repeated many times. The chiropractors delighted in the proceedings. They skilfully created the impression that it was a fight between themselves and the medical doctors. Being a fight, the implication was that the antagonists were somewhere of nearly equal strength and therefore they were as good as the MDs. Our solicitor, charged with upholding the laws of Alabama, prosecuted them vigorously as he would a plumber or any other artizan who could not show a license that permitted him to render a public service which, if improperly rendered, might lead to injury to the public. In passing let me correct another implication that the chiropractic body delights in advancing: namely, that they cannot get a license to practice in Alabama. The truth is that the present medical practice act provides that they can appear before the Board of Medical Examiners. They are not examined on all subjects that medical doctors are re-

quired to pass. In the history of the Board eight chiropractors have taken the examinations. Four have passed. The majority of chiropractors have set up office without a license, in open defiance of the laws of our state.

Naturally our legislators are concerned by the open violation of our laws. Any law disobeyed and ignored weakens our strongest law. Our legislators are naturally sensitive to the organized propaganda and political efforts of the chiropractors. I rather suspect that they are tired of the campaign that is waged in each legislature and would like to settle the matter. They are confronted with the real problem of providing an examination that chiropractors will take and a law that the people will enforce and still giving the people protection against the untrained and the ignorant. They have a real problem. If they should ever seek the advice of our profession I feel that we should make these suggestions. The law should provide that an applicant for license should pass an examination given by competent men on the subjects of anatomy, physiology and pathology. Since I am not conversant with the various modalities of chiropractic I would not suggest any other examinations that might be needed but it would seem that anyone who offers to treat the illnesses of human beings should have a sound knowledge of these basic sciences. I also feel that the law should provide some restriction on advertising. Health and illness are important matters

and the public should not be subjected to the persuasion and exploitation of the mass propaganda of our advertising media. In our own profession we do not permit advertising as a part of our ethical standard because we do not feel it is in the public interest. Finally, I feel that any law licensing chiropractors should have it clearly understood what his title should be. His title should clearly identify him as a chiropractor and not a medical doctor.

This has been a lengthy discussion. It is an important subject. If you have any thoughts on the matter I would be delighted if you would write them to me as your President. I shall present them at our future meetings. Finally, in closing let me say that the practice of medicine is an art and in our scientific enthusiasm we should not lose sight of the human side of medicine and the necessity of a certain amount of laying on of hands. Also, if we deny the public the psychic escape to chiropractic, we must be prepared to deal with those who seek some other avenue in their escape from reality.

Colgan J. Turhan



ORGANIZATION SECTION

COMMUNITY RATING SURVEY

INTRODUCTION

The Committee on Public Relations of The Medical Association of the State of Alabama undertook the task of evaluating some thirty-eight municipalities in the state of Alabama that were listed with the Physician Placement Service as being without a doctor, or needing an additional doctor. There were good reasons for this survey—very good reasons.

The chief reasons this survey was attempted are:

- (1) To determine where and to what extent additional medical care is needed;
- (2) To assist physicians in locating in communities where they can practice to the full ex-

tent of their training;

(3) To evaluate the medical desirability of a given location from the standpoint of a physician seeking a place to practice;

(4) To assist communities in improving their medical desirability rating;

(5) To submit statistical information to corroborate the facts revealed in this survey;

(6) To assist the State Board of Censors in placing to the best advantage the six students now on state scholarships at the University of Alabama Medical College who have agreed to practice in communities of 10,000 population or less when they graduate.

The Physician Placement Service was established in 1954 with card file information on doc-

tors who were listed with the Placement Service, as well as information on communities. From 1954 to date this card file merely listed, in one section, the physicians who were seeking a practice. In another category were listed the towns that the Physician Placement Service knew were seeking a doctor. The Physician Placement Service made contact with the doctor and the community and notified each that the other was in need of services and left it up to the doctor and community to get together for the purpose of working out details. After reviewing this type set-up for a period of approximately four years, the Committee on Public Relations decided that this method was inadequate to meet the increasing needs. Consequently, the Committee on Public Relations proposed to conduct a community rating survey with the idea of trying to establish certain facts that were not obtainable merely by sending out a questionnaire to a community. A survey committee as a subcommittee of the Public Relations Committee was appointed to go into each of thirty-eight communities for the dual purpose of determining just what medical facilities were available and of establishing the actual need of the community for a doctor or additional medical personnel.

Subsequently the Committee on Public Relations appointed a survey committee composed of Dr. J. Michaelson, Foley, Chairman, Committee on Public Relations; Dr. R. O. Rutland, Jr., Fayette, Chairman, Subcommittee on Physician Placement; and W. V. Wallace, Montgomery, Executive Assistant. In addition to the appointment of this committee, each County Medical Society President, in whose county a community was to be surveyed, was asked to send a doctor to represent his society on the evaluation committee when it was evaluating a town in his area.

The plans for the survey having been completed, the committee was now ready to begin its survey.

PROCEDURE

An attempt was made to simplify the procedure as much as possible. The procedure consisted of:

(1) A letter to 301 municipalities whose population was 25,000 or under asking that a questionnaire be completed and returned to The Medical Association of the State of Alabama. Since this letter was addressed to the Town Clerk, or the City Clerk of the respective communities, the Director of the Alabama League of Municipalities cooperated with the committee by co-signing this letter. It was the thought of the committee that a greater percentage of replies would result if he did so and this proved to be a wise procedure.

(2) To those communities not answering the

first questionnaire a second letter was prepared and sent to the President of the Chamber of Commerce. This letter and questionnaire were prepared in a manner to obtain information on a county-wide basis. This was intentional, with the hope that from 301 letters and questionnaires we could obtain a clear picture of how the counties rated relative to medical services and desirability. Out of the sixty-seven counties, fifty-two reported via one or more municipalities. In some instances only one town in a county reported, but in many counties several towns reported.

(3) Concurrently with the first mailing, the Alabama Academy of General Practice sent a letter to a selected member of the Alabama Academy of General Practice in that county, and if there was no member in that county the letter was sent to the President of the County Medical Society asking for similar information on a questionnaire. A second letter was also prepared by the Academy and a third letter by the Executive Secretary of The Medical Association of the State of Alabama. These combined mailings have brought replies from sixty-two counties.

(4) After the questionnaires were returned to the central office, notes were compared with the Alabama Academy of General Practice in regard to the needs for additional medical care in each community. As a rule, the laymen's and the physicians' answers corresponded very well except in four instances. In each of the four instances there is some question relative to whether the layman understood the question. A letter will be prepared and sent to each of the four laymen pointing out this wide variation, at the same time inquiring whether they thoroughly understood the meaning of the question. At the very outset the committee felt that it would be wise to make a pilot run of a few representative communities and then compare notes before making the other visits. In view of this, the survey committee made a pilot survey of Phil Campbell, in Franklin County, and Coffeeville and Grove Hill, both in Clarke County.

(5) About three weeks before each community was visited letters went out informing them that a survey committee would be in their particular area at an appointed time and date for the purpose of evaluating and rating the community. Then the letter was sent to the President of the respective County Medical Society, with a copy to the Secretary, asking that he attend an evaluation meeting.

(6) At this meeting the community was rated on a special form by the committee and a local group. Also, a pamphlet was prepared entitled "Your Town Weighed in the Balance" and distributed to all communities.

(7) When the survey was completed on a com-

munity, the material was mimeographed and, as doctors apply for this information, it is submitted to them.

The first community to be visited was Phil Campbell in Franklin County. Unfortunately, the Mayor of Phil Campbell was engaged in politics on the particular day that the survey committee was there and had been for several weeks prior to this. He had not received our letter in time to have someone meet with us. However, the survey committee managed to meet with the doctor located there, a man in his seventies, and the situation was discussed with him. The doctor immediately stated that he would be glad to have a younger man come to Phil Campbell, and that he would turn his practice over to a younger doctor. After questioning the doctor, the survey committee met with some of the citizens of the community and discussed with them the possibilities of securing a doctor for their community. An attempt was made to contact the two ministers in town and also the high school principal; but unfortunately all three were out of town. The committee then toured the community to try to determine its rating. As a result, the desirability rating given Phil Campbell was "C" from a doctor's standpoint.

The survey committee then went to Coffeerville in Clarke County. The committee was pleased to note that the reception was quite different from the one in the first community visited. The committee had pre-arranged to meet at the High School in Coffeerville, and upon arrival it was noticed that there were about thirty gentlemen waiting for the committee in front of the High School. The reception was a very warm and friendly one in Coffeerville. Immediately upon arrival the committee was escorted into one of the classrooms for a round table discussion of the potential in Coffeerville. The citizens of this community had made considerable preparation for the meeting. It was noted that each man present had been assigned a particular phase of the community to discuss. Some of the topics discussed were the population of the community; what the potential population would be; the industry of the community and its potential; where the community derives its income, etc. After discussion for an hour and a half, the gentlemen escorted the committee to view the clinic which they had constructed. They stated that the clinic had cost about \$20,000.00 and the equipment about \$7,000.00. This money was raised by local subscription and title to the clinic is held by the town of Coffeerville. They are willing to make liberal rental arrangements, or arrangements to purchase, with a physician who would come to Coffeerville to practice. The population of Coffeerville itself consists of only about 250, but there is a trade area of 3,000 population. After viewing the clinic the

gentlemen escorted the committee down to the river to view a new bridge which would connect the adjoining county, thereby opening up another large trade area for the community. Later the committee was escorted to the community center where a very good lunch was enjoyed. In addition to this, excellent entertainment was provided by the high school students. It was later discovered that the merchants in the community had closed the stores and the high school had turned out in order to make a good impression on the survey committee. The committee felt that this was a good location for a doctor who desired to practice in a rural community; and, after carefully considering and evaluating the material and the town, a desirability rating of "B" was given the community.

The committee then moved on to Grove Hill, which is about eighteen miles from Coffeerville. Grove Hill has one doctor who is over sixty years of age. He operates a hospital and is looking for an associate, an assistant, or a doctor to come in on his own. The committee met with this doctor and about five of the leading citizens of the community. A very frank discussion resulted, which was the type of thing the committee was looking for in its attempts to survey these communities honestly. The committee toured the town and also the hospital to see what facilities were there. After carefully considering the information, a desirability rating of "A" was given the community of Grove Hill.

These three communities completed the pilot survey and notes were then compared to determine the procedure for surveying the other communities. After considering all the information a plan was formulated and the survey continued.

THE SURVEY

With at least some experience behind the committee it was now ready to move into the other communities with a little more confidence and a little more awareness of just what to look for in the evaluation of each community. Throughout the state the doctors from the local medical societies were very cooperative in that they attended a good percentage of the meetings. In several of the communities there were as many as three local doctors who were present to add to the discussion. For this the committee is duly grateful. A very good reception continued throughout the state in all of the communities. Usually the leading citizens of the community were the ones who were present for the discussion since it was specifically asked that at least the town council, the mayor, the high school principal, and other leading citizens sit down and talk over the problems with us. However, in a number of the communi-

ties there were several interested citizens who arrived voluntarily and without invitation to participate. In one community there were about sixty-five people who met the committee and discussed very frankly their chances of attracting a doctor. The committee was greatly impressed with this fine response, and it was a pleasant surprise to see so many of the leading citizens participate in the discussion.

As the survey progressed the committee became aware of the fact that there were a number of clinics in smaller communities which were adequately equipped and that the Physician Placement Service had no knowledge of this whatsoever. Consequently the Physician Placement Service could not pass this information on to doctors who were looking for a location. There were other things of which the Placement Service had no information, such as industry that had moved into an area since the community was first listed; newly constructed churches; recreation facilities, etc. Because of this, the committee was in a position to add to the material already in its files and, thereby, give a clearer picture to a prospective doctor.

One thing that impressed the committee was the fact that, in four communities, the citizens who met with the committee felt that their problems were not as great as they were when they first applied for additional physicians. In a number of cases, within a year or two, one or more physicians had moved into the community and that community had failed to notify the Placement Service. The committee was pleased to remove these four communities from its list because they and the survey committee both felt that they had adequate medical care.

As previously stated, the Placement Service has been in operation since 1954. Since then a total of 325 physicians have applied for assistance in obtaining locations. Out of these 325, 115 have been placed in suitable locations through the Physician Placement Service. Since the Community Rating Survey has been completed two doctors have been placed in communities that were surveyed. One doctor visited the headquarters office one morning, read the available information, visited a community that afternoon and the next morning agreed to settle and practice there. This would have been impossible without the survey information. This doctor had never heard of the community in which he agreed to settle and he had toured the state looking for a location.

The entire survey required approximately eight months to complete, with approximately four weeks devoted to actual contact with citizens of the several communities. On the average, three communities were surveyed each day. The thirty-

eight communities surveyed took the committee into twenty-four counties. There were only two cases in which the survey committee was received with a cold shoulder. In each of these cases, within a short time, the cold atmosphere warmed, with the simple expedient of a frank discussion. In each case it was noted that there were already two or three doctors in the community and two or three drug stores. The committee felt that the main reason for the opposition was the fact that apparently one of the drug stores was being left out on prescriptions and that there was some contention among the pharmacists in the community. The committee felt that this local dissension should be brought to the attention of the prospective doctor.

The continuing survey went very smoothly throughout all the communities. The committee met with from three to sixty-five citizens in each community. Over all, the committee feels that the majority of the people were very anxious for the survey team to visit their community for the purpose of evaluating it.

SIDELIGHTS

Citizens in one community in Alabama recently realized that the medical problem in their community was acute. Immediately they set out to alleviate this condition in their community.

The community, Ariton, Alabama, with a population of about 750, is located in Dale County. Some of the leading citizens in this community decided that it was "high time" that something was done about securing a doctor. The Lions Club took the initiative and decided to create a committee for the purpose of raising funds. They selected Mr. E. L. Fralish, Mr. Kyser Wilson, and Mr. D. B. Richardson to serve on, what the Lions Club termed, a "Shoestring Committee." This was a very appropriate title for the committee because the Lions Club donated one pair of used shoestrings to this committee and instructed it to go out and raise money on the shoestrings. One member of this committee took one shoestring and went out and very shortly sold the shoestring for \$1.00. With the \$1.00 he went to a store and purchased \$1.00 worth of shoestrings. The three men sold the shoestrings for 10c, 25c, \$1.00, or whatever they could sell them for. Also, some of the wholesale stores in the area gave merchandise to the committee and authorized them to sell it and apply the funds to the building of a clinic with the hope of securing a doctor. By this means, the "Shoestring Committee" in a very short time raised approximately \$300.00 to start its project. Also, there was formed what the citizens called, "The Ariton Improvement Foundation." Its chief goal was to secure a doctor for the community.

The town of Ariton donated a lot to the Ariton

Improvement Foundation with the understanding that it would construct a clinic on the lot. With \$300.00 raised as an initial endeavor, the Ariton Improvement Foundation launched a campaign to increase the funds. One way of doing this was by auctioning off portions of the building. That is, one person gave \$100.00 for the privilege of giving and inserting the windows for the clinic; another man gave \$100.00 for the privilege of digging the ditches; another man gave \$100.00 for drawing up the blueprints; and another man gave \$100.00 for naming the clinic. By means of organization and initiative such as this, the Ariton Improvement Foundation constructed a seven room clinic for a prospective doctor. The estimated cost of this clinic is set at approximately \$6,000.00.

Before the clinic was completed, the citizens of Ariton realized that they would have to have some assistance in getting a doctor. They applied to the Physician Placement Service and in time the Physician Placement Service aided them in getting a doctor. Before too long, a doctor was secured for Ariton and he stayed there for approximately a year, but because of the vast amount of work and his health, he was forced to leave. Ariton then remained without a doctor for a period of about a year, but again, through the services of the Physician Placement Service, Ariton has a doctor located there.

The survey committee is indeed impressed with the fact that such a small community attempted such a big job and saw it through to the end. Other communities throughout the state of Alabama have attempted similar projects and a number of them have been completed while others are still progressing and will be completed, we trust, shortly.

Another small community, even smaller than Ariton, in the state of Alabama, also attempted this great project. The community of Grant, in Marshall County, with the help of the county, constructed a clinic which has an estimated value of \$35,000. Also, it is completely equipped and the town is currently constructing a doctor's home. The community of Grant, for several years, has attempted to secure a doctor but every doctor who made contact with the town decided not to settle there because of the limited facilities available. However, after some few years, a temporary clinic was set up and a doctor secured. He stayed there for only a short time and moved on to a larger community.

The people of Grant realized that, in order to get a doctor for their community and keep him, they must have adequate facilities available. In view of this they contacted the county authorities and arrangements were made to construct a clinic in the community. The clinic is now completed

and the house for the doctor will be completed within a few weeks.

Through the services of Physician Placement Service, Grant has already secured a doctor who will begin practice on July 15. The survey committee finds that, through the efforts of the Physician Placement Service, smaller towns in Alabama are getting doctors.

RESULTS

The results from this community rating survey have already come to light. Since the pilot run was made, some two months ago, already there have been two doctors placed in communities that were surveyed by the survey committee. By visiting the community and seeing first hand just what the facilities are, this first-hand information can be passed on to doctors seeking a location, which was the case in each of these instances.

The Committee on Public Relations feels that this is one of the best public relations gestures that has been attempted. If nothing else were accomplished, except the personal contact made with these communities, the committee feels that the time, money, and effort involved were justified in enhancing the relationship and prestige of the medical profession in Alabama with these communities.

The survey committee's work is not done as yet, although there have been thirty-eight communities surveyed. Since the survey has been completed there have been two communities listed as wanting doctors. The survey committee will be a permanent part of the Committee on Public Relations and, as each new community is listed with the Physician Placement Service, the survey committee will immediately visit that community to evaluate it and to try to help make the community more attractive to a doctor.

LOOKING TOWARD THE FUTURE

As has been previously pointed out there were a number of reasons for conducting this survey; however, there is one reason which was mentioned at the outset of this report which needs some elaboration. At the present time there are six state scholarships available each year for medical students at the University of Alabama Medical College in Birmingham. The state of Alabama, through legislation in 1953, created the scholarships with the understanding that after the medical student had completed his training and internship he would settle in a community in Alabama with a population 10,000 or under and practice there for a period of five years to liquidate his indebtedness to the state, or he would forfeit and pay back the amount of his scholarship as stated by the Alabama law.

The first six students have interned and were

available for practice July 15. The committee feels that this is one of the chief reasons a survey of this type should be conducted on a continuing basis. Each year there will be six doctors ready to begin practice in Alabama under the scholarship program. It is hoped that, as a direct result of this survey, all communities in the state of Alabama that are looking for doctors are now better equipped and have a better insight on how to improve their town in order to attract a doctor.

COMMITTEE ON PUBLIC RELATIONS

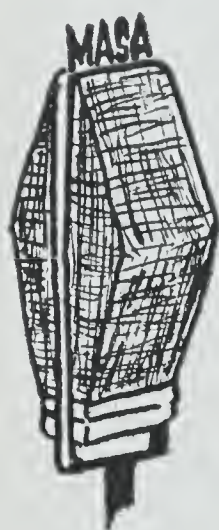
Dr. J. Michaelson, Foley, *Chairman*
 Dr. M. Vaun Adams, Mobile, *Vice-Chairman*
 Dr. Haynes Byrne, Montgomery
 Dr. N. E. Cowart, Huntsville
 Dr. H. M. Simpson, Jr., Florence
 Dr. J. D. Bush, Jr., Gadsden
 Dr. J. M. Chenault, Decatur
 Dr. J. O. Colley, Jr., Troy
 Dr. L. D. McLaughlin, Ozark
 Dr. J. E. Moss, Mobile
 Dr. E. B. Glenn, Birmingham
 Dr. Leslie G. Cole, Talladega
 Dr. T. C. Donald, Jr., Anniston
 Dr. W. E. Doggett, Jr., Birmingham
 Dr. R. O. Rutland, Jr., Fayette

COUNTY SOCIETY INTERIM REPORTS

Over quite a number of years there has gradually evolved a situation in the Medical Association which needs correcting. A number of the county society secretaries have in effect been reporting new members only at the time of making the annual report. By this practice we are doing the young physicians as well as the Association a disservice.

Secretaries of the respective county societies are now being requested to make interim reports. New members should be reported to the State Medical Association upon their acceptance by the county society, and dues for these new members should be forwarded at that time. There are several programs in which the Association is engaged that require information on new members as quickly as possible; also, their names should be placed on mailing lists to receive the *Journal* and other materials which are sent out from the central office as soon as they have been accepted by the county society and have paid their dues.

The central office has mailed an interim report form and a reply envelope to each county society secretary. Additional forms will be mailed at certain intervals. It is hoped that by this method the rolls of the Association can be kept on a current basis and the new members will receive all of the benefits which their membership in the Association entitles them to receive.



ASSOCIATION FORUM

ALABAMA OPENS FIRST OUTPATIENT CLINIC FOR ALCOHOLICS

John L. Sanders, Educational Director
 State of Alabama Commission on Alcoholism

A new treatment resource became available to Alabama doctors when the State Commission on Alcoholism opened its first outpatient clinic for alcoholics on July 28 in Birmingham. Doctors who are confronted with this complex illness in Birmingham and North Alabama will be able to refer their alcoholic patients to the specialized treatment team staffing the clinic.

The clinical team will use the multi-disciplinary approach which has proved effective in similar clinics in other states. The emphasis will be on

psychotherapy applied by the following personnel: a full-time psychiatrist, a part-time internist, a part-time psychologist, and two full-time psychiatric social workers. The Senior Physician and Director of the Clinic in Birmingham will be Dr. Edwin M. Fuchs who has been in residency in psychiatry at the Philadelphia General Hospital, Philadelphia, Pa., since July 1955. The Chief Psychiatric Social Worker will be Percy M. Sessions who has held a similar position at Southeastern Louisiana Hospital.

The approach of the Commission and the clinical team is based on the belief that, as a type of addiction, alcoholism is diagnosable and treatable. However, it is recognized that in alcoholism, as in

other chronic conditions, goals for treatment and rehabilitation vary according to the patient's condition and possibility of recovery. The minimal aim in all cases will be to assist the individual to establish and maintain sobriety. The maximum aim is to bring about desired changes within the patient through the use of all tested means and to assist him to regain, not only sobriety, but better health and greater happiness by means of a more ideally adjusted personality.

The outpatient clinic provides for the patient a flexible treatment plan which results from the recommendations of the treatment staff. Basic treatment includes a diagnostic study of the patient, where an attempt is made to meet the range of his particular problems. Treatment may include psychotherapy, case work, group therapy, limited medication, limited hospitalization, or referral to other appropriate agencies or setting.

Gross medical conditions will not be treated by the clinic's staff. No patient will be admitted if any gross medical condition is present and is not under control or stabilized. However, a patient may be admitted while being treated concurrently elsewhere for the gross medical condition.

If any of the following conditions are present, a careful review will be made of an application for admission to see if a favorable response to treatment can be expected: organic damage, psychoses other than alcohol psychoses, sociopathic disturbances (criminality and vagabondage), mental deficiencies, suicidal tendencies, and addictions other than alcohol.

Patients are expected to come to the clinic voluntarily upon self-referral or at the suggestion of their family, friends, clergyman, physician, a member of Alcoholics Anonymous, or various social agencies. Patients are expected to secure appointments; however, it is realized that a certain degree of flexibility is necessary in order to start the treatment process when the patient is strongly motivated.

The fee policies of the clinic will be based upon a sliding scale. The determination of the fee is based upon a financial evaluation in which an individual's income is the main guide. Financial arrangements are secondary to therapeutic considerations.

Outpatient alcoholism clinics in other states have demonstrated their effectiveness in handling substantial numbers of patients at minimal per capita costs.

Although arrangements may be made with hospitals located near a regional clinic for hospital care of patients in an acutely intoxicated state, primary emphasis will be on the treatment of patients who can be handled in the outpatient setting. The

Commission will not make any definite hospitalization plans until a fact-finding survey now underway is completed. The survey will include an extensive study of the availability of treatment facilities for alcoholics all over the state. It is to be completed by October of this year.

The Commission's policies are determined by an autonomous board of seven members. Five of the seven board positions are filled by persons who hold specific state offices. The other two positions are filled by gubernatorial appointment. Present members and their respective offices are Dr. Daniel G. Gill, State Health Officer, Dr. J. Sidney Tarwater, Chairman of the Board and Head of State Hospitals, Dr. Elmer L. Caveny, Head of the University Department of Psychiatry, Mr. Robert E. Cammack, Director of the Division of Vocational Education, Dr. James S. Snoddy, Director of the Department of Pensions and Security, Charles G. Abercrombie, lay member and Executive Secretary of the Board, and Glynn C. Jones, lay member. Nimrod T. Frazier is Administrator of the Commission and is directly responsible to the Board for the execution of its program.

The Commission was created by an act of the Legislature on June 17, 1945, as the Commission on Education with Respect to Alcoholism. Until 1957 the Commission's program emphasized education, since funds were inadequate for treatment and rehabilitation. However, the 1957 Legislature gave the Commission an annual appropriation of \$150,000 and called for the establishment of outpatient clinics for the treatment of alcoholics.

Presidential Salute for A. M. A. Journal—President Dwight D. Eisenhower has extended his personal "felicitations" to the Journal of the American Medical Association on the occasion of its seventy-fifth anniversary.

The Chief Executive said the Journal is "a potent force for progress in the field of medical discovery and medical information."

His views, which appear in the July 12 Journal of A. M. A., were expressed in a letter to Dr. Austin Smith, editor of the weekly medical publication.

"Throughout my lifetime of service in the Army, as well as in my present position," the President said, "I have watched with pride and interest the giant strides that have been achieved toward a rising standard of health for people everywhere."

He continued, "The Journal of the American Medical Association has reported these advances faithfully, and its editors must share with me both a sense of deep accomplishment and the conviction that in the years to come the horizons are truly unlimited."

Nearly 27 per cent of U. S. drivers involved in 1957 traffic fatalities were under 25 years of age.

Passenger cars were involved in over 78 per cent of all U. S. traffic fatalities in 1957 and in 86 per cent of traffic injuries.

In 1957, there were over 370 persons killed while crossing at an intersection with signal. Remember, cross cautiously.



MEDICAL CENTER NEWS



Medical Center Deed Purchase—Hill Ferguson, chairman pro-tem of the University of Alabama Board of Trustees, is shown above, left, delivering a check to Russell B. Harris, vice-chairman of the Housing Authority of the Birmingham District, in return for the deed to a 101½-block expansion area. Looking on are Dean of the University of Alabama College of Medicine Dr. Robert C. Berson, and Hugh Denman, director of urban renewal of the Housing Authority.

DEED TO GIGANTIC AREA OF LAND PURCHASED BY MEDICAL CENTER

Future growth of the University of Alabama Medical Center was assured in formal ceremonies in the University Hospital Auditorium on June 9 with transfer of a deed to a gigantic 101½-block expansion area.

Russell B. Harris, vice-chairman of the Housing Authority of the Birmingham District, presented the deed to Hill Ferguson, chairman pro-tem of the University of Alabama Board of Trustees.

Mr. Ferguson delivered a check for \$2,654,990 to Mr. Harris in return for the deed, culminating seven years of work by all those who were concerned with the vast potentialities of an extended center which would adequately serve the people of Alabama and surrounding areas.

Master of Ceremonies Ehney A. Camp, Jr., vice-president and treasurer of Liberty National Life Insurance Co., called "one of the most important events of the history of our state," the delivery of the deed to the land surrounding the center.

Mayor James W. Morgan spoke briefly on the problems confronted by the Birmingham City Commission in its efforts to secure government aid in clearing the slum area and turning it over to the University instead of back to the residents removed as in the case of other sections.

County Health Officer Dr. George A. Denison reviewed the Health Department's role in the slum-clearance project.

Frank E. Spain, first chairman of the Housing Authority, discussed the Housing Authority's action in culminating the land transfer.

Vice-President of Health Affairs Dr. Robert C. Berson said the acquisition of the land was a giant step forward in the advancement of health for the people of Alabama.

Other speakers included Kenneth W. Grimley, executive secretary of the Alabama Antituberculosis Association, and Robert Weatherly, chairman of the board of the Children's Hospital, whose institutions will be located in the newly-cleared area.

The acquisition of the 10½-block area was made possible by the passage of Amendment No. 4 by the voters of Alabama in 1957.

Instrumental in arousing state-wide interest in

the amendment was Frank P. Samford, president of Liberty National Life Insurance Co., and chairman of the Committee for the Adoption of Amendment No. 4. Mr. Samford and his committee members effectively brought before the public the great need for the further expansion and development of the University Medical Center. Amendment No. 4 was passed by a large majority.

The Birmingham Junior Chamber of Commerce is credited with sparking the move which brought the slum area to the attention of the community after the Health Department had pointed out the dangers inherent in the area.

Governor James E. Folsom and State Finance Director Fuller Kimbrell gave impetus to the move to bring the bill providing for a bond issue before the Alabama Legislature, which subsequently passed it by an overwhelming majority, and placed it before the citizens of Alabama for vote.

Expansion projects to be started soon in the Medical Center are student housing quarters and a two and one-half-million-dollar nurses' residence.

Already being constructed is a two-million-dollar six-story research building.



Deed Ceremonies—Pictured above is a part of the crowd that attended the formal deed presentation ceremonies in University Hospital Auditorium on June 9.



MISS LAMPKIN RECEIVES PATHOLOGY AWARD

Beatrice C. Lampkin who has recently become a junior medical student is this year's recipient of the Stuart Graves Pathology Award.

This award is given each year to that sophomore student "who, in the weighted opinion of the faculty of the Department of Pathology, is considered by them to be entitled to the award, the selection being based upon character, conduct, proficiency in study and attitude toward the work in classes of pathology."

The Stuart Graves Pathology Award, named by President Paty and Dean Kracke, consists of the income for the previous calendar year from a fund amounting to nearly \$23,000 established by the Professor Emeritus of Pathology and entrusted in perpetuity to the University of Alabama. The award was first given in June 1958.

DIVISION OF NEUROLOGY HAS BRAZILIAN FELLOWS

Doctor Helio Lemmi completed his Fellowship in the Division of Neurology on July 1 and went to Houston, Texas, for additional work in Neurophysiology and Electroencephalography at Baylor University Medical School.

Dr. Lemmi began his Fellowship at the Medical Center on October 22, 1956. He is originally of Sao Paulo, Brazil.

He will be replaced by Dr. Rubens M. Ribeiro of Sao Paulo, Brazil. Dr. Ribeiro has spent the last two years in Clinical Neurology and related fields at the Escola Paulista de Medicina in Sao Paulo.

The Division of Neurology will have an additional Junior Fellow, Dr. Donato J. R. Friguglietti, beginning July 1.

Dr. Donato J. R. Friguglietti, also of Sao Paulo, Brazil, has spent the past year in Clinical Neurol-

ogy and related fields at Escola Paulista de Medicina in Sao Paulo.



Fellows in Neurology—Shown above are three Brazilian Fellows studying a map of their native country. They are, from left to right, Dr. Rubens M. Ribeiro, Dr. Helio Lemmi, and Dr. Donato J. R. Friguglietti.



Books for Korea—Shown above holding a few of the many books received in the "Books For Korea Drive" are, left to right, Dr. Dong Soon Kim, Mrs. Kathryn Wirtz, and Dr. Soon Kyu Suh.

KOREAN BOOK DRIVE IS HUGE SUCCESS

Persons associated with the University of Alabama Medical Center have donated more than 400 used text books to the Korean Student Federation of the United States in support of the Federation's "Books For Korea Drive."

Local activities were conducted by Mrs. Kathryn Wirtz, Foreign Student Advisor, and five Korean doctors doing postgraduate work at the Medical Center: Dr. Dong Soon Kim, Dr. Kwang Wook Rowe, Dr. Biong Woo Lee, Dr. Soon Kyu Suh, and Dr. Bock Joon Whang.

All books have been sent to the Korean Student Federation in New York where they will be sent to the Ministry of Education of the Republic of

Korea and distributed to the medical and dental colleges in Korea.

The "Books For Korea" Drive was originated by Korean students studying in this country "who felt that an intellectual and cultural advancement was as urgently needed in their country as any other material rehabilitation in Korea today."

Medical and dental colleges throughout the country are cooperating in the drive.

DENTAL SCHOOL RECEIVES GRANT

The University of Alabama School of Dentistry is the recipient of a \$15,000 grant from the W. Kellogg Foundation. This grant will be used for the purpose of establishing a revolving student loan fund.

The W. Kellogg Foundation has shown a long-time interest in the financial problems experienced by medical and dental students throughout the nation. During World War II the Foundation made available revolving student loan funds to medical and dental schools across the country.

The Foundation is now extending similar gifts to dental schools established since that time.

This is not the first time the University of Alabama School of Dentistry has benefited from action of the W. Kellogg Foundation.

Grants have previously been made available to the School of Dentistry for postgraduate training programs for general dental practitioners, for the establishment of an undergraduate dental program in dental hygiene, and for a long-range study of the teaching of dental practice administration.

Dean of the University of Alabama School of Dentistry Dr. J. F. Volker has been a member of the Advisory Committee on Dentistry of the W. Kellogg Foundation for the past five years.

AWARDS ARE GIVEN AT SENIOR BANQUET

The annual senior banquet for the graduating medical seniors was held at the Thomas Jefferson Hotel on the evening of Friday, May 30.

The medical class of 1958 established a plaque to be awarded each year to that resident of University Hospital who, in the opinion of the senior class, was judged the most outstanding. Dr. Clark Gravlee, Jr., second year resident, Department of Obstetrics and Gynecology, was the first to receive this award.

This plaque is now in the Medical Center Library.

The Department of Obstetrics and Gynecology received a letter of appreciation from the senior class at the banquet expressing its opinion that it was the most outstanding department in the University of Alabama Medical College.

Dr. W. Nick Jones, professor and chairman of the Department of Obstetrics and Gynecology, was recognized by the senior class as being the most outstanding part-time professor at the Medical Center.

Dr. Sterling Edwards, assistant professor of Surgery, received a similar award for being the most outstanding full-time professor.

NURSING SENIORS GET PINS

The annual buffet supper honoring the graduating nurses was held in Hillman Auditorium on May 31. This buffet supper is given each year by the Administrative Staff, Nursing Service Supervisors, and the faculty of the School of Nursing.

Traditionally, this is the night on which the seniors receive their school pins and begin wearing them on their uniforms.

Approximately two hundred guests were served, and enjoyed the buffet supper while listening to the music of the Harrison Cooper Orchestra.

One of the highlights of the evening was the awarding of the University Hospital Auxiliary Award to the outstanding senior who, in the opinion of the Head Nurses, Supervisors, and School of Nursing Faculty, has shown outstanding nursing ability. This award of one hundred dollars was presented to Mrs. Clara Jean Stallings, York, Alabama, by Mrs. Gilbert Vaughn, President of the Auxiliary.

Surgery for One Heart Defect Needed in Very Early Life—Surgical correction of patent ductus arteriosus, a congenital heart defect, should be done before a child reaches the age of five, even if he shows no symptoms, two Ohio surgeons said recently.

Writing in the May 24 Journal of the American Medical Association, Drs. H. William Clatworthy Jr. and Victor G. McDonald Jr., Columbus, said the "optimum age" for performing the operation has not been clearly defined, although it usually has been considered to be between six and 12, unless signs of heart failure appear.

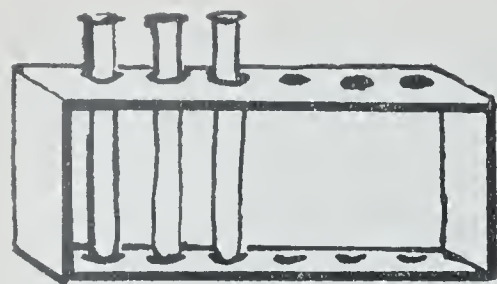
However, failure to correct the defect in early life may expose the child to the "needless threat" of retarded growth, heart and lung malfunction, and other serious complications, the doctors said.

The ductus arteriosus is a duct between the aorta and the pulmonary artery in the fetus. When this normal fetal duct fails to close at birth, it usually produces an enlargement of the heart.

Of 63 patients under the age of 16 years who were operated on at Columbus Children's Hospital during a seven-year period, nearly 50 per cent were younger than five years. Among the 63 patients there were no deaths or any serious postoperative complications.

In general the postoperative course was smoother in the younger children, even though the majority of them showed serious symptoms, were badly underweight, and often suffered from the heart's inability to maintain adequate circulation.

On the basis of the study, the doctors concluded that the operation should be performed on any child who shows symptoms as soon as the diagnosis is established and on children without symptoms before they reach the age of five years.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

CARE OF INDIGENT CANCER PATIENTS

Services for medically indigent cancer patients in Alabama are offered by both the State Department of Public Health and the American Cancer Society, Inc., Alabama Division. Frequently there is confusion as to the relative roles of these two agencies. Although they serve the same persons, there is no overlapping of functions, but the services of each agency complement those of the other.

Treatment of these persons is, by law, a function of the State Health Department. Legislation enacted in 1943 charged the Department with the responsibility of providing treatment for indigent cancer patients. To fulfill this responsibility the Division of Cancer Control was organized in the Bureau of Preventable Diseases, and tumor clinics were established at various points in the state. Currently there are six clinics—two each in Birmingham, Mobile and Montgomery.

Services offered by the State Tumor Clinics are limited to medically indigent persons with cancer who have been approved for treatment by the State Health Department. Medically indigent is defined as being "unable to defray the cost of treatment while paying for the necessities of life." Determination of medical indigency is a function of the Department of Pensions and Security.

Patients may be referred to the tumor clinics by private physicians only. The procedure for referral is as follows; there are no other channels through which a patient may be sent to a state-supported clinic: When a cancer patient tells his physician that he is unable to pay for the necessary treatment, the physician fills out, in duplicate, an "Application for State Tumor Aid." These forms may be obtained from any county health department. A copy of the form accompanies this article.

When he has completed the first two sections of the application, the physician sends both copies to the Department of Pensions and Security in the patient's county of residence. No cover letter is necessary, and the physician is not asked to take any further action. The Department of Pensions and Security investigates the patient's financial status to determine whether or not he is medically indigent. When the investigation is completed, the agency completes the appropriate section of the application and forwards it to the county

health department. The county health officer completes the section of the application reserved for his department and forwards both copies to the Cancer Control Division, State Health Department, Montgomery.

The decision as to whether a particular patient will receive service at one of the state clinics is made by the Division of Cancer Control, State Health Department. Unfortunately, limited funds make it impossible to furnish treatment for all who are medically indigent. Therefore, it is necessary from time to time to develop criteria for selection in addition to the condition of indigency. These criteria are not rigid and their application is always governed by the availability of funds and the number of applications received. In general, the requirements are that the patient be ambulatory and that his disease not be so far advanced as to render treatment hopeless. There is no provision for plastic surgery. Treatment with expensive drugs at state expense is not usually authorized. Every effort is made to expend funds set aside for cancer control in a manner that will "do the greatest good for the greatest number."

The patient, his doctor and the county health department are informed of the decision made by the State Health Department. If the patient is accepted for treatment, he is notified that he has been given a definite appointment at a specific clinic, usually the one nearest his home. *No patient should report to a clinic without such notice as he can be seen by appointment only.* Physicians and surgeons who staff the clinics donate their services. Strict adherence to the appointment system permits the fullest possible utilization of the time which they give.

Patients are expected to make their own arrangements for transportation to and from the clinics as the state has no funds to cover this expense. When the patient reports to the clinic, the staff confirms the diagnosis of cancer and decides on the form of treatment. For patients who are found actually to have cancer, the State Health Department pays for the recommended treatment. If surgery is the treatment of choice, the surgeon's services are donated, and the Department pays for hospitalization.

The services of the American Cancer Society begin where those of the State Health Department leave off. It has been mentioned that the state does not pay for transportation. The Cancer Society will pay bus fare to and from the clinic for

DEPARTMENT OF HEALTH

APPLICATION FOR STATE TUMOR AID



Name _____ Birth Date _____ Race _____ Sex _____ SMDW _____
(If married female, supply given name and husband's initials)

Home County _____ Date of Application _____

Mailing Address _____ Length of Residence in Alabama _____

Directions to Home _____

Occupation _____ Duration _____ Former _____ Duration _____

MEDICAL HISTORY

History of Cancer in Family: Yes ☐ No ☐ Relationship _____ If "yes" site _____

Has Patient had Cancer Before: Yes ☐ No ☐ If "yes" site _____

Treated by: Dr. _____ Address _____

Surgery: Date _____ (Describe) _____

X-ray: Date _____ (Amount and Ports) _____

Radium: Date _____ (Amount) _____

Present Complaint: _____

Site of Lesion: _____ Duration _____

Remarks: _____

Diagnosis Based On: Clinical Findings - Yes ☐ No ☐ Serologic Test for Syphilis: _____ Results _____ Date _____

Biopsy Report: _____ Pathologist _____ Date _____

Evidence of Spread: Localized ☐ Regional Metastases ☐ Remote Metastases ☐

Ambulatory: Yes ☐ No ☐ General Condition of Patient _____

Signed: _____ M. D., Family Physician Date _____

Address: _____

WELFARE REPORT

Individual to be Notified and Responsible for Patient _____
Name Address Relationship to Pt.

Hospital Insurance _____ Name of Company Policy No. Veteran's Cl. No. _____

Medically Indigent ☐ Not Medically Indigent ☐ Receiving Public Assistance ☐

Signed: _____ Director, Co. Pensions and Security Dept. Date: _____

COUNTY HEALTH DEPARTMENT

Information Complete: Yes ☐ No ☐ Case Apparently Eligible for Clinic Service: Yes ☐ No ☐

Signed: _____ County Health Officer Date: _____

APPROVED: Yes ☐ No ☐ Signed: _____ Date _____

W. H. Y. Smith, M. D., C. P. H.
Director, Bureau of Preventable Diseases

NOTE: SUBMIT IN DUPLICATE. ALL INFORMATION MUST BE COMPLETE

CA.1 5m - 7/1/58

Alabama State Department of Health
Bureau of Preventable Diseases - Division Cancer Control
Montgomery 4, Alabama

DEPARTMENT OF HEALTH

patients who are unable to pay their own transportation. Payment will be made for as many trips as may be prescribed by the clinic. This policy permits patients to return for check-ups or to receive treatment as out-patients. Requests for this service should be submitted to the Educational Chairman of the American Cancer Society in the patient's home county. It should be noted that requests will not be approved unless patients have clinic appointments.

If palliative or pain-relieving drugs are prescribed for a medically indigent cancer patient, the American Cancer Society will pay up to \$1.00 a day for such medicine. Applications for such medicines should be made to the American Cancer Society state office, 2029 Warrior Road, Birmingham, on forms provided by the Cancer Society.

The Society will also furnish dressings for medically indigent cancer patients. Requests for dressings may be made through the state office of the Cancer Society by the patient's physician or the public health nurse in his county. Dressings are mailed direct to the patient, and such requests should show patient's name and complete address.

Since the state-supported program got under way in 1943 over 15,000 persons have received diagnosis or treatment or both at the State Tumor Clinics. The Health Department has no record of how many of these same persons have also been served by the Cancer Society. It would probably be difficult to arrive at an exact figure, since the Cancer Society not only offers direct services but also conducts an extensive educational program. This program has benefited indigent as well as other cancer patients. When the State Tumor Clinics were first set up, many of their patients were suffering from cancer in far advanced stages. In recent years more patients have been referred while their disease is in early enough stages to make the possibility of cure more likely. This is believed to be in large part a result of the American Cancer Society's educational program.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director
SPECIMENS EXAMINED

May 1958

Examinations for diphtheria bacilli and Vincent's	69
Agglutination tests	543
Typhoid cultures (blood, feces and urine)	416
Brucella cultures	11
Examinations for malaria	15
Examinations for intestinal parasites	2,941
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid)	16,837
Examinations for gonococci	756
Examinations for tubercle bacilli	2,730
Examinations for Negri bodies (smears and animal inoculations)	223

Water examinations	1,468
Milk and dairy products examinations	3,030
Miscellaneous examinations	371
Cultures-fungi	7
Total	29,418**

**The Birmingham Branch Laboratory did not get its report in in time to be included in this report.

✂ ✂ ✂

June 1958

Examinations for diphtheria bacilli and Vincent's	57
Agglutination tests	713
Typhoid cultures (blood, feces and urine)	779
Brucella cultures	6
Examinations for malaria	72
Examinations for intestinal parasites	2,954
Darkfield examinations	4
Serologic tests for syphilis (blood and spinal fluid)	34,431
Examinations for gonococci	2,584
Examinations for tubercle bacilli	4,596
Examinations for Negri bodies (smears and animal inoculations)	323
Water examinations	3,358
Milk and dairy products examinations	5,934
Cultures-fungi	2
Miscellaneous examinations	1,260
Total	57,073

✂ ✂ ✂

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1958

	May	June	E.E.* June
Typhoid and paratyphoid	2	0	6
Undulant fever	0	0	2
Meningitis	11	2	11
Scarlet fever	887	503	22
Whooping cough	41	55	64
Diphtheria	3	2	6
Tetanus	4	3	3
Tuberculosis	247	161	217
Tularemia	1	0	0
Amebic dysentery	1	0	2
Malaria	0	0	0
Influenza	314	45	37
Smallpox	0	0	0
Measles	2774	936	575
Poliomyelitis	0	0	24
Encephalitis	1	0	1
Chickenpox	201	25	73
Typhus fever	0	0	2
Mumps	146	28	159
Cancer	620	529	396
Pellagra	1	0	0
Pneumonia	276	146	159
Syphilis	112	171	186
Chancroid	1	5	7
Gonorrhea	310	406	364
Rabies—Human cases	0	0	0
Positive animal heads	19	20	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

September 1958

No. 3

THE USE OF STEROID AND ADRENOCORTICOTROPIC HORMONES IN THE TREATMENT OF MUMPS ORCHITIS

GEORGE C. RISMAN, M. D.

Homewood, Alabama

There are few diseases in which the steroid and adrenocorticotrophic hormones have not been utilized. In most instances their usage has been heralded initially by enthusiastic reports. Continued investigation, however, has frequently revealed their limited value. While in some diseases they may exert a specific action, generally their effect is to suppress inflammatory or hypergic responses of the host tissues until the natural processes of healing and recovery ensue. Recently these hormones have been used prophylactically and therapeutically in the orchitis of mumps with inconsistent results.

Prior to the use of cortisone and its congeners, estrogenic hormones enjoyed a vogue which far exceeded their actual value. Only after several years of usage and investigation did the consensus agree on their inefficacy. It appears that the steroid hormones are now in a similar therapeutic position. The purpose of this report is to review these divergent data and to determine whether a significant improvement in symptoms and reduction in morbidity has occurred with the use of these agents.

Although comments had been made earlier^{1,1a,2} regarding the efficacy of these agents, Solem³ first reported detailed observations. He concluded that, in five of six cases, 100 I. U. of ACTH, administered intramuscularly, resulted in a prompt subsidence of the acute inflammation. Analysis of his data

reveals that, in case one, treatment was instituted on the third day of orchitis with prompt symptomatic relief on the following day. He stated that "decrease of the swelling continued" but did not indicate the length of time required for the testicle to revert to normal size. Cases three, four, and five are briefly described and "followed exactly the same pattern." Since the observations of Candel,⁴ McGuinness,⁵ Eagles,⁶ and others indicate that fever resolves by crisis in 50 per cent of the cases by the fifth day, it is difficult to attach much significance to this observation. Nevertheless, it appeared that considerable relief of pain was afforded. The possibility of an accelerated resolution of inflammation was also suggested.

In case two ACTH was given on the fourth day and provided temporary relief but a relapse occurred on the sixth day, at which time the ACTH was repeated. Resolution in this case is not adequately described but certainly required a total of eight days, which is not a dramatic decrease in morbidity. In case six (bilateral orchitis) no significant benefits were demonstrated. The evidence in cases one, three, four, and five suggest, but do not attest to, the efficacy of the treatment. Indeed, the delayed resolution in cases two and six imply that the results were fortuitous or that mild cases had been treated. The variable response in these cases is consistent with the variable course of the illness itself. Furthermore, the delayed institution of therapy does not provide a satisfactory control.

1. Friedewald, W. F.: Mumps, in Principles of Internal Medicine, edited by T. R. Harrison and others, New York, Blakiston Company, p. 1111, 1954.

1a. Beeson, P. B.: In Yearbook of Medicine, Chicago, Yearbook Publishers, p. 63, 1955-56.

2. McAllister, R. M.: Mumps, in Current Therapy, edited by H. F. Conn, Philadelphia, W. B. Saunders Company, p. 28, 1956.

3. Solem, Jan H.: The Effect of Corticotropin in the Orchitis of Mumps, Acta Med. Scandinav. 149: 341-344, 1954.

4. Candel, S.: Epididymitis in Mumps Including Orchitis; Further Clinical Studies and Comments, Ann. Int. Med. 34: 20-36 (Jan.) 1951.

5. McGuinness, A. C., and Gall, S. A.: Mumps at Army Camps in 1943, War Med. 5: 95-104 (Feb.) 1944.

6. Eagles, A. Y.: Analysis of a Four-Year Epidemic of Mumps, Arch. Int. Med. 80: 374-871 (Sept.) 1947.

The report by Zeluff and Fatheree⁷ demonstrated also the salutary effect of steroid treatment. Their conclusions, after observing four cases, stated, "Steroids should be promptly instituted in all cases of mumps orchitis." These authors think hormonal treatment "will probably reduce the degree of atrophy and potential sterility."

Analysis of case one indicates that the patient was taking diethylstilbesterol (dosage not stated) prior to the onset of orchitis and treatment with hydrocortisone was begun on the second day. "A prompt dramatic response in . . . edema . . . pain . . . fever" was noted, but the duration of swelling was not stated. In case three a patient was seen "on the sixth day . . . of parotitis" with a right orchitis. However, the duration of orchitic symptoms was not mentioned. Resolution of inflammation was apparently promptly effected with prednisone.

Three of these cases were examined later, and in two no evidence of testicular atrophy was noted. However, in a larger series,⁸ orchitic atrophy after recovery was noted in several patients despite a satisfactory response to corticoids.

Petersdorf and Bennett⁸ described the largest series (23 patients) in the American literature. Their conclusions are more conservative than those of some^{3,7} but more enthusiastic than those of others.⁹⁻¹¹ Analysis of their data reveals that patients were selected and admitted to the hospital only when the parotitis was complicated by orchitis. In such instances the onset of orchitis cannot be dated exactly, and the duration of symptoms prior to therapy is susceptible to error. They attributed a significant decrease in morbidity to cortisone. However, their data are inconsistent with the temperature graphs in cases one, seven, and fourteen as set forth in Table 1 and Figure 2 of their article. The conclusion that the average duration of fever (3.3 days) was significantly reduced by treatment when compared to a control series (4.2 days, Candel) is, therefore, questioned when these cases are included. In any event, they concluded that cortisone induced rapid defervescence and reduction of testicular swelling and pain.

7. Zeluff, G. W., and Fatheree, T. S.: Steroid Therapy in Mumps Orchitis, *Ann. Int. Med.* 46: 852-856 (May) 1957.

8. Petersdorf, R. G., and Bennett, I. L.: Treatment of Mumps Orchitis with Adrenal Hormones, *A. M. A. Arch. Int. Med.* 99: 221-33 (Feb.) 1957.

9. Stenberg, E. S., and Berry, W. C.: The Use of Cortisone in the Treatment of Mumps Orchitis, *U. S. Armed Forces Med. J.* 7: 414-418, 1956.

10. Risman, George C.: Effect of Cortisone in Orchitis of Epidemic Parotitis (Mumps), *J. A. M. A.* 162: 875-77 (October 27) 1956.

11. Klemola, Erkki, and Somer, Pekka: Corticotropin och Cortisone vid Parotitorchit. *Nord. Med.* 9: 1128-29, 1956.

The observations of Stenberg and Berry⁹ indicate that the prophylactic use of cortisone (dosages not stated) failed to prevent orchitis in approximately fifty cases. Using a standardized divided-dose scheme of 300 mg. on the first day, 200 mg. on the second day, and 150 mg. thereafter in ten cases, they obtained an excellent response in four cases and a moderate improvement in four others. In the remaining two patients relapses occurred when the dose was tapered below 150 mg. per day. The authors concluded that there was little value in the routine administration of cortisone, especially in mild cases. In severe cases, however, the steroids induced significant subjective and moderate objective improvement. The natural course of the disease was not thought to have been altered.

The results reported by Risman¹⁰ are consistent with those of Stenberg and Berry. He noted that fever persisted in several cases, despite large doses (200-300 mg.) of cortisone administered on the initial day of symptoms. His data also indicated that the duration of fever and swelling were not significantly altered by the steroid agents.

The observations of Klemola and Somer¹¹ suggest that no benefit occurred from either cortisone or ACTH, administered intramuscularly, when compared to a control group treated with a placebo. The dosage of ACTH (40 U.), as well as that of cortisone (200 mg.), appears small by American standards, and the route chosen has been shown to be unreliable due to local inactivation and poor absorption. However, treatment was instituted early in the disease. These authors concluded that treatment instituted later in the course of illness³ invalidated any conclusions because of the known variability of the process.

The most recent report¹² reviewed the results of eighty-five cases of orchitis treated with ACTH or cortisone. A control series was also available. The data are somewhat invalidated since a controlled scheme of therapy was not used, the original observations were made by many different physicians, and the dosage and route of administration of the agents varied considerably. Statistical analysis of these heterogeneous data, however, indicated no significant effect on the orchitis except for the amelioration of pain in the cortisone group. The duration of swelling, persistence of fever, morbidity, and relapse rate were unaffected by either agent and did not differ from the control group. The authors concluded that, although the subjective feeling of pain was greatly diminished, no significant objective improvement could be demonstrated.

12. Smith, I. M., and Bishir, J. W.: The Treatment of Mumps Orchitis with ACTH and Cortisone, *New Eng. J. Med.* 258: 120-24, Jan. 16, 1958.

CONCLUSIONS

The effects of a widely-used non-specific therapeutic agent (cortisone, its congeners, and ACTH) on the orchitis of mumps have been described in several publications. The opinions of the observers vary from unbridled enthusiasm and routine administration to qualified conservativeness. The data of some authors suggest a rapid resolution of the inflammatory process. Other data indicate marked subjective improvement but only moderate objective improvement.

Undoubtedly, the inherent variability of the disease, the partiality of the observer, the difficulty in making objective measurements, and the varying doses used have affected the observations. The following conclusions appear justified on the basis of the composite data:

1. The steroid or adrenocorticotrophic hormones significantly improve the subjective symptoms of orchitis.

2. In mild cases their usage probably is of little value, but in severe orchitis their usage is indicated.

3. The pathogenesis of the disease is not shortened by steroid therapy, and it is necessary to continue treatment through the possible relapse period.

4. Treatment with steroids during the preexisting parotitis or orchitis does not prevent the occurrence of orchitis on the opposite side.

5. Prevention of testicular atrophy cannot be assured despite an apparently excellent response to therapy.

6. Three hundred milligrams of cortisone (or comparable amounts of its congeners) should be administered in divided doses by mouth on the first day, and two hundred milligrams on the second day. Subsequent dosage should be determined by the patient's response.

7. ACTH should be administered either in large doses by the intramuscular route (100 I. U. per day) or in smaller doses by an eight-hour intravenous drip daily.

MUSEUM MOUNTINGS AND COLORED PRINTS USED IN TEACHING NEUROPATHOLOGY

CHARLES R. LAFFERTY, M. D.

and

LESTER M. ROBERTSON

Biloxi, Mississippi

Some hospitals with psychiatric and neurology residency training programs have difficulty obtaining an adequate variety of neuropathologic specimens for teaching neuropathologic anatomy. The Gulfport Division of the Veterans Administration Center, Biloxi, Mississippi, is such an institution, as most of the neuropathologic specimens from autopsies consist of lesions associated with cerebral arteriosclerosis. To overcome this deficiency we contacted the Veterans Administration general medical and surgical hospitals in our vicinity requesting interesting and unusual neuropathologic specimens. These hospitals have been very cooperative in assisting us in building up our pathologic museum. Small hospitals wishing to have their own museums may adopt similar methods for obtaining and mounting specimens.

First, we wish to describe our method of preparing, mounting and displaying these gross specimens for ready accessibility to residents and staff members for study. Second, we wish to outline

our method of preparing and displaying colored prints for use in teaching neuropathology. Residents in psychiatry and neurology frequently experience difficulty interpreting the use of special stains in the microscopic study of diseases of the nervous system, and to assist them we prepared and displayed 8" x 10" colored prints demonstrating microscopic changes found in the brain in inflammatory diseases, degenerative diseases, and tumors of the brain.

PLASTIC WATCH GLASS MUSEUM MOUNTINGS (FOR BRAIN SECTIONS)

As a fixative we use a solution recommended by the Medical Museum Section of the Armed Forces Institute of Pathology. This particular fixative was chosen because, in our experience, it has demonstrated superior preservation of natural colors. The same fluid (with the addition of 0.5% sodium hydrosulphite) is used for mounting. However, any of the popular fixatives may be used, such as Klotz' or Kiserling's.

The stock solution is prepared as follows:

1. Sodium phosphate monobasic	89.1 gm.
2. Sodium phosphate dibasic	112.5 gm.
3. Formaldehyde (40%)	950 ml.
4. Distilled water q.s.ad	19,000 ml.

From the Department of Pathology, Veterans Administration Center, Gulfport Division, Biloxi, Mississippi.

The co-author is Histology Technician in the Department of Pathology.

This makes a suitable fixation for gross presentation. Fixation may take from two to four times as long as standard 10% Formalin. If turbidity occurs, change fluid once or twice. To restore color, a solution of the above composition is used (to which 0.5% sodium hydrosulphite has been added). This is now used as a preservative fluid for the finished mount. The specimen is placed in the fixing fluid (of which there should be a sufficient amount to equal 10 times the bulk of the specimen). When the specimen has become firm and the fluid clear and unstained with blood, the sodium hydrosulphite may be added and the specimen mounted.

The acrylic plastic watch glasses and base plates used are purchased as a unit ready for use from Tech-Craft, Inc., 2107 Center Street, Tacoma, Washington.

The 8" (200 mm.) watch glass will serve well for most specimens, and will accommodate sections 3/4th inches thick. Multiple small specimens may be mounted under one watch glass if secured to base plate by means of plastic thorns. These thorns are fastened to base plate by cementing with the fluid supplied by Tech-Craft, Inc.

The dome is secured to base plate by applying ethylene dichloride as used in joining plastics. Preserving fluid is poured into the sealed mount through a 1/4th-inch hole in the base plate, which in turn is sealed by means of a rubber stopper.

These watch glasses may be handled without danger to hands or mount and are safe for shipping if the need arises.

Our display racks (Fig. 1) are so constructed as to be quickly dissembled and arranged in a neat tier. Each tray is covered by the succeeding one, and the topmost tray is covered by a lid upon which the easels are secured, thus making a unit that can be moved any distance desired.



Fig. 1—Gross Pathological Specimens Mounted in Plastic Containers and Displayed on Racks for Teaching Neuropathology.

METHOD FOR PREPARING COLORED PRINTS

The colored prints shown in Figure 2 are enlargements of color transparencies made in our laboratory from microscopic slides, stained with special stains peculiar to neuropathology. Color transparencies are made on 35 mm. Ektachrome-

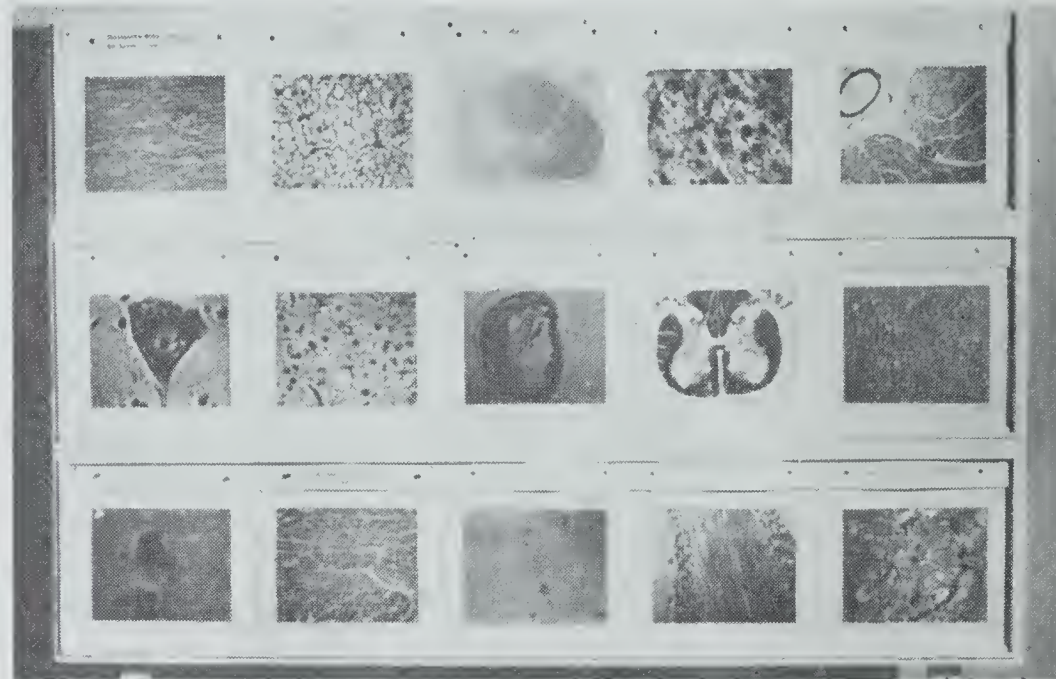


Fig. 2—8" x 10" Colored Prints Demonstrating Microscopic Changes in Neurological Diseases.

type film with a 60-volt coil filament lamp and 82-A and 82-C light-balancing filter. The camera is a Kodak 35 mm. Pony with microscope attachment. These transparencies were magnified approximately 250 diameters.

The 8" x 10" prints were made by using Ansco Color Printon. A sheet of Printon is given a single exposure through a color transparency, either by contact or in an enlarger. Color compensating filters may be used to correct the color balance of the light source and transparency. This Printon print process is known as reversal development and requires no special dark-room equipment.

CONCLUSION

It is hoped that hospitals with psychiatry and neurology training programs may find the methods described for securing, mounting and displaying neuropathologic material of value, as we have found them to be of inestimable value to our entire staff in understanding diseases of the nervous system. Mounted gross specimens are more or less permanent and, as material becomes available, new mounts may be added to the collection. Residents frequently view brain lesions at conferences or autopsies but on such occasions time to study brain pathology properly is limited. Therefore, if interesting and unusual specimens are mounted and displayed, residents have the opportunity to study them at their leisure. The colored prints may also be studied at any time and assist in locating a specific lesion or tissue slides.

SUMMARY

A method is described for collecting, preparing, mounting and displaying gross neuropathologic specimens and colored prints demonstrating the use of neurologic stains and microscopic changes found in neurologic diseases.

EARLY ALABAMA PHYSICIANS

EMMETT B. CARMICHAEL

Birmingham, Alabama

First: Dr. James Marion Sims.

Dr. J. Marion Sims, who became one of the most renowned surgeons of his day, descended from rural stock. His family had been respected farmers in Virginia and the Carolinas for five generations and his father, John Sims, as an orphan, was bound out to help his farmer uncles. As a result, he received little formal education until after J. Marion was born on January 25, 1813 at Hanging Rock, South Carolina.

As John Sims prospered, his determination became fixed that his children should have a better opportunity for education than he himself had had. Thus it was that Marion, the eldest son, was barely five when his father launched him on his scholastic career.

John Sims purchased a tavern in Lancasterville and moved the family there in 1825. The new Franklin Academy opened in December of the same year with J. Marion as one of its first students. At his father's insistence, he began the study of both Greek and Latin. But he soon found time to visit with Theresa Jones, daughter of Dr. Bartlett Jones. Thus casual visits developed into a romance but young Marion was always conscious of Mrs. Jones' disapproval which he felt was due to the contrast between his father's financial position and that of Dr. Jones. To make matters worse, Dr. Jones not only was the family physician but his ledgers carried a variety of entries against John Sims for produce and out and out loans of money.

Young Sims graduated from Franklin Academy at seventeen. In the meantime, his father had been county surveyor, sheriff of Lancaster District, and only recently advanced to the rank of colonel of Lancaster's militia regiment. Marion entered the state college at Columbia and graduated in December of 1832. His father had expected him to become a lawyer while his mother prayed for him to become a preacher. Marion tried to explain to his father that he was aware that a man with a college education was expected to be a preacher, lawyer or doctor and that he could not be either of the first two. He had no desire to be a doctor but he told his father that "If I must study a profession, there is nothing left for me to do but to study medicine." His father agreed and suggested that Marion begin his studies by reading medicine with Dr. Churchill Jones, brother of the late Bartlett Jones. It was during that summer that he and Theresa Jones

agreed that they would love each other forever and that they would manage to overcome his poverty and the disapproval of Mrs. Jones so that they could be married. Marion entered the Charleston Medical College in November of 1833 and the next year he entered Jefferson Medical College in Philadelphia. He received his M. D. degree on March 1, 1835.

In May 1835 Dr. Sims returned to his home town to practice medicine. His first patient was a young child and it died within a few days. The second patient was a young child also and Dr. Sims told the father that, if he lost the child, he would quit the town. The child only lived a few days. Dr. Sims did have one other patient who was the richest man in Lancaster but who imbibed too much. Dr. Sims treated him and received ten dollars, the only fee which he received in his hometown. Dr. Sims wrote that "The patients that ought to have lived died and the one that ought to have died lived."

On October 13, 1835 Dr. Sims and his father set out for Marengo County, Alabama, by horse and wagon. About three weeks later, they arrived at Mount Meigs, Montgomery County, Alabama, where he opened his office for the practice of medicine. He wrote Theresa's mother that he would return to Lancaster in February 1836 to marry Theresa. Mrs. Jones had other ideas, which included planning and preparation that she considered necessary for a proper wedding. So she moved the date up ten months to December 21, 1836. Soon after the wedding, Dr. Sims and his wife left for Mount Meigs. During the next year, he moved to Macon County, Alabama, and in 1840 the Sims family moved to Montgomery.

In 1845 he had a case of retroversion of the uterus which responded to treatment. During the treatment he conceived of the duck-bill speculum to aid in vaginal examinations. At that time he had three patients with vesico-vaginal fistula, a condition considered to be incurable. He used the speculum and operated successfully on the patients by using silver wire as suture material. All three patients were cured within a few weeks. Dr. Sims' reputation as a gynecologist was well established during the next few years.

He decided to sell his holdings in Montgomery and moved to New York City in May 1853. He purchased a home on Madison Avenue and was ready to perform his vesico-vaginal fistula operation. He was invited to operate on the patients of two doctors. Then one of them borrowed his instruments to perform the operation but did not invite Dr.

This paper was read at the Tenth Annual Meeting of the Alabama Historical Association, April 26, 1957, Montevallo, Alabama.

Sims to assist. It was soon general knowledge that this doctor and others were performing these operations in other hospitals. Dr. Sims had no hospital and would not advertise so he had no way of bringing himself before the public. As soon as the doctors learned how to perform his operation, they would drop him. He soon found that he was without friends and almost without a business. He sent his wife, Theresa, back to Montgomery to sell their slaves to help relieve their strained circumstances.

Dr. Sims was successful in interesting several influential women in operating a woman's hospital. This was effected on May 1, 1855 as a charity hospital with 30 beds and Dr. Sims was the surgeon. A charter for the woman's hospital was obtained from the New York Legislature in 1857. In 1861 Dr. Sims went to Europe and demonstrated his operation on vesico-vaginal fistula in many of the leading cities. The Belgian Government created him a Knight of Leopold the First and the French Government conferred on him the Decoration of Knight of the Legion of Honor for his signal contributions to surgery. New commitments always seemed to arise which prolonged Dr. Sims' stay in Europe. He had hoped to be present at the dedication of the new woman's hospital in the autumn of 1867. He did return in time to be the principal speaker at the first anniversary celebration in 1868. The Board of Governors of the Woman's Hospital gave Dr. Sims the honorary title of chief consulting surgeon and he was elected to membership on its governing board.

In 1873 Dr. Sims' son, Harry, was appointed assistant surgeon on the staff. At the next annual meeting in November 1874, Dr. Sims expressed his views in the form of objections: (1) "You have transcended the bonds of your authority in the matter of excluding cancer patients" and (2) concerning the barring of spectators beyond the number of fifteen, he stated that, "When you see fit to invade the sanctity of our operating room and to dictate to us who shall be present . . . you evidently overstep the limits of your authority." In the heat of the resulting discussion, Dr. Sims offered his resignation and it was accepted. Actually resigning from the Woman's Hospital Board was the last thing that Dr. Sims wanted to do. A few months after the Woman's Hospital episode, the medical profession elected him president of the American Medical Association.

Dr. Sims died on November 13, 1883. Statues have been erected on the Capitol grounds at both Columbia, S. C. and Montgomery, Alabama, and a bust was placed in Bryant Park, New York City.



Second: Jerome Cochran.

Towards the end of June 1865 a former Confederate Army surgeon tacked up a sign near his

quarters in Mobile and surveyed his labors with quiet, dark-gray eyes. For the moment, he stood alone, a perfect stranger and without funds.

The sign read: Jerome Cochran, M. D.

He was born in Moscow, Fayette County, Tennessee, December 4, 1831. When he was a small child, his family moved to Marshall County, Mississippi, where his father became a cotton planter. After his twelfth birthday, Jerome became a regular worker in the fields, side by side with his father's Negroes.

During the summers, when the press of work was over, he attended a neighborhood field school where he acquired the rudiments of English. Subsequently he supplemented his poor beginning by an extensive course of reading and private study in the fields of mathematics, logic, political economy, metaphysics, theology, biology, literature, general science and modern languages.

At nineteen years of age he became a country school teacher and continued teaching for five years. In 1855 he married Sarah Jane, daughter of Jared Collins, a well-to-do farmer of De Soto County, Mississippi. In the same year he met Dr. Robert H. Harrison, professor of materia medica and therapeutics in the Botanico-Medical College, Memphis, who induced him to become a student of medicine in that institution. He attended two courses of lectures and graduated as Doctor of Medicine in the spring of 1857. He graduated at the head of his class and was elected to deliver the valedictory address. The curriculum was very similar to that in other regular medical schools, except for courses in materia medica and medicine. He learned long before graduation that the doctrines of the botanic system were untenable.

After two years of practice in north Mississippi, Dr. Cochran went to Nashville where he entered the medical department of the University of Nashville. His Memphis diploma was not recognized so he was obliged to commence again as a first course student. After two winter courses and one summer course, he received a second medical degree in February 1861. He again was elected to read the valedictory address.

Dr. Cochran spent a few months at his old home in Mississippi and it was while he was there that the War Between the States broke out. He joined the Mississippi troops at Corinth but soon became a contract physician in the Confederate hospital at Okalona, Mississippi. It was while he was employed at this hospital that he applied for an appointment as surgeon in the Confederate Army. Dr. S. P. Moore, Surgeon-General, sent him a commission as assistant surgeon which Dr. Cochran promptly declined. However, early in 1862, he received his appointment as surgeon and continued on duty at Okalona until after the battle of Corinth

in 1863. Tours of duty were served at Marion Station and at Tuscaloosa. At the time of the surrender, he was in Tuscaloosa with his family and while waiting for the confusion to subside which was incident to the new order of things, he turned his attention to the study of mental diseases at the State Insane Hospital whose superintendent was Dr. Peter Bryce.

In 1868, three years after he began the practice of medicine in Mobile, the Medical College of Alabama was reopened and Dr. Cochran was appointed professor of chemistry. Following a disagreement with the faculty concerning who should control the City Hospital, he resigned his professorship. However, before the next session began, the faculty created for him the chair of public hygiene and medical jurisprudence which he held until 1877.

From 1870 until his death his efforts and studies were directed towards public hygiene and especially towards bettering laws regulating sanitary matters and the practice of medicine. So thoroughly did he comprehend the various problems that he proposed and so completely did he solve them, much of that which appears in the statutes of the state today in relation to public health and medical practice is his handiwork.

Dr. Cochran wrote an ordinance which was adopted by the City of Mobile authorizing the County Medical Society to name a board of health. He was made the first City Health Officer in 1871 and served until the Republicans took over in 1873.

Dr. Cochran's connection with the Medical Association of the State of Alabama began when a group of physicians met at Selma for the purpose of reorganizing the Association on March 3, 1868 following eight years of suspension due to the war. He was elected secretary at this meeting and was appointed chairman of the committee to revise and amend the old constitution.

In 1877 he was elected county physician for Mobile County for a term of three years and during the great yellow fever epidemic the next summer he was selected to be the physician at the quarantine station at Fort Morgan. He resigned this position on September 30, 1878 to accept a place on the National Yellow Fever Commission, and later on received an appointment on the Board of Experts which was to aid the Congressional Committee which was investigating the epidemic. The Board of Experts was dissolved on February 3, 1879. About two months later, on April 11, he was unanimously elected by the State Medical Association as Health Officer for a term of five years at a salary of \$1,500.00 per year.

Dr. Cochran formulated a plan for organizing a state board of health which was endorsed at the Huntsville meeting in 1872 and enacted into law

by the General Assembly of the state in February 1875. This law made the State Medical Association the State Board of Health and County Medical Societies, in affiliation with it, County Boards of Health.

The history of the adoption of a new constitution for the State Association is almost a parallel to that establishing the boards of health. Dr. Cochran wrote the new constitution and presented it in 1870. It was considered at each of the next three annual meetings and adopted in 1873 at the Tuscaloosa meeting. Its provision included a State Board of Censors and Dr. Cochran was chosen for a term of five years.

Dr. Cochran was endowed with the capacities of a great scholar, and one writer made this statement: "He is one of the most learned men of the South." His fine command of the English language, his self control, his powers of analysis, gave him absolute command of his resources as an able writer, interesting speaker and debator.

His literary record is quite impressive and extensive. Many of his papers appeared in the Transactions of the State Medical Association.

Dr. Cochran continued as State Health officer until his death on August 17, 1896. In 1898, State Medical Association President Luther L. Hill recommended establishing the Jerome Cochran Lecture to be given at each annual meeting of the Association. The first lecture was given the next year by Dr. J. T. Searcy of Tuscaloosa.

The great objects of his public life in his adopted state were the organization of the medical profession, and its investment with legal powers and functions honorable to itself and useful to Alabama.

* * *

Third: John Allan Wyeth.

It was near the banks of the Tennessee River in Marshall County, Alabama, that John Allan Wyeth was born on May 26, 1845. His birthplace was the Cherokee Missionary Station which was founded by the Presbyterian Church.

Judge Louis Weiss Wyeth (father of John Allan) received a classical education at Harrisburg Academy, studied law, was admitted to practice, and three years later, in 1836, settled in Marshall County, Alabama, where he became a prominent lawyer. He was elected County Judge in 1837 and later on served in the State Legislature.

John Allan Wyeth spent a rather uneventful but normal childhood. In his fifteenth year, he passed college entrance examinations and on February 1, 1861 matriculated at La Grange Military Academy. Young Wyeth's college career ended in December 1861 after only one year of training.

The state had seceded and the Southern Confederacy had been organized during his year at college. After consultation with his parents, John Allan decided to join Company I which was part of the Fourth Alabama Cavalry and he enrolled early in April 1863. He took part in numerous engagements and was taken prisoner on October 4, 1863 and confined at Camp Morton, Indiana, until exchanged in April 1865.

With one year of college training and five years of mixed experiences, including fifteen months of prison life, John Allan entered the freshman medical class of the University of Louisville in the fall of 1867. Wyeth did not enter the ward of a hospital or receive instruction by the bedside of a patient during the two year course.

At a public commencement on March 2, 1869 the degree of Doctor of Medicine was conferred upon John Allan Wyeth. The same month, Dr. Wyeth returned to Guntersville and opened an office. He was quite successful with his first case, but a case of diabetes mellitus which progressed to a fatal termination was too much for him. Dr. Wyeth felt that he was unfit to take the responsibility of the life, health and happiness of those who might be willing to place themselves in his care. He knew that he needed clinical and laboratory training under experienced teachers, and he decided to close his office and give up his practice until he could secure such training.

The major part of the next three years was spent in Arkansas where Dr. Wyeth became associated with a contractor who was building a railroad bridge at De Vall's Bluff. On the first of May 1872, Wyeth's contract was finished and he received a \$1,000.00 bonus which, with other earnings, made it possible for him to resume his medical studies in New York City. He discovered that there were no special courses offered to graduates in medicine and he selected Bellevue Hospital Medical College where he matriculated on October 16, 1872 and graduated on March 1, 1873 with a second M. D. degree. In 1874 he was appointed prosecutor to the chair of anatomy, a post he held until 1878.

In 1878 he visited Europe in order to study the methods of teaching in the great medical centers of London, Paris, and Berlin. He had been planning a new system of medical education in America and this prompted him to make the survey. So in 1881 Wyeth founded the New York Polyclinic Medical School and Hospital, the first postgraduate medical school in America. He became professor of surgery and surgeon in chief and later on president of the institution.

Wyeth made the acquaintance of the renowned Dr. J. Marion Sims in 1877 and visited in his Paris home the next year. The warm friendship which

developed continued until Sims' death in 1883. In 1886 Wyeth married Florence Nightingale Sims, daughter of Dr. Sims and three children were born to this union.

Wyeth was both thorough and meticulous in perfecting his various operational techniques. In 1889 Wyeth reported his work on "Bloodless Amputation at the Shoulder Joints," and in 1890 at the annual meeting of the American Medical Association he reported his studies on "Bloodless Amputation at the Hip-Joint."

At the 1893 meeting of the American Medical Association in Milwaukee, Wyeth was elected first vice-president. Eight years later, at the St. Paul meeting of this Association, he was elected president. He delivered the presidential address at the fifty-third annual session of the American Medical Association at Saratoga Springs, New York, in 1902. Honors continued to come and Wyeth was elected president of the Medical Society of the State of New York in 1890 and the New York Academy of Medicine in 1906 and president of the New York Southern Society in 1907. The University of Alabama conferred the honorary degree, Doctor of Laws, on Wyeth in 1902, and in 1909 the same degree was conferred by the University of Maryland.

He was a prolific writer and not only wrote papers about his research but his literary efforts also included a wide variety of subjects such as a textbook, biography, history and poetry. His autobiography *With Sabre and Scalpel*, 1914, includes twelve of his poems. His book on the *Life of Lieutenant-General Nathan Bedford Forrest*, 1899, received wide acclaim.

Dr. Wyeth died suddenly of heart disease on May 8, 1922, and with him passed one of America's pioneers, a great surgeon. A bronze statue of Dr. Wyeth stands on the Capitol grounds in Montgomery at the right of the walk as one faces the front of the Capitol building.

Tranquilizer Used in Childbirth—Still another use has been made of one of the tranquilizers: to relieve pain and to produce relaxation during childbirth.

The drug promazine was given intravenously to 100 women by Drs. Stanley P. Wegryn and Robert A. Marks, New Orleans. Also given to the women were a spinal anesthesia and merperidine, a pain-relieving drug.

Writing in the August 16 Journal of the American Medical Association, they said excellent results were achieved in 57 of the women and good results in 29.

Promazine has a "marked relaxing effect" and helps prevent vomiting. It also seems to have some properties that help the patient to forget part or all of the labor, the doctors said.

RESPIRATORY INSUFFICIENCY AND PEPTIC ULCERATION

LLOYD C. WARR
and
W. MARK SHIPMAN
Birmingham, Alabama

During a period of assignment to the surgical service, our attention was directed to the coincidence of peptic diseases of the esophagus, stomach and duodenum and chronic respiratory insufficiency.^{1,13,15,16,17} It was early apparent that polycythemia was not a feature of this syndrome and the attractive hypothesis of peptic ulceration on this basis had to be abandoned. The suggestion was made that the CO₂ retention of respiratory acidosis was necessarily associated with some mechanism for the prompt and accelerated secretion of chloride. There was the further observation that chronic respiratory insufficiency occurred in the older age groups, with more frequent impairment of renal function. It seemed quite possible, therefore, that hyperchlorhydria and peptic disease might be produced by the physiologic need to increase chloride excretion in the elderly patient with poor renal function in order to compensate for CO₂ retention. There was the alternative possibility that increased gastric secretion of HCl could serve as a homeostatic mechanism by secretion of H⁺ ions, thereby preserving blood pH. By this initial compensatory mechanism, the acidosis of respiratory insufficiency would be avoided. It is the purpose of this paper to review the evidence for the coincidence of peptic disease and chronic respiratory insufficiency and to examine the possible mechanisms underlying such a syndrome.

CLINICAL EVIDENCE FOR THE COINCIDENCE OF PEPTIC ULCER AND RESPIRATORY INSUFFICIENCY

The most impressive evidence for the association of peptic ulcer and emphysema was provided by Green and Dundee.¹³ In a series of 700 autopsies the overall incidence of peptic ulcer was contrasted with selected groups at comparable age levels with other chronic diseases. The following table is reproduced from their paper:

TYPE OF CASE	NUMBER OF CASES	NUMBER WITH ULCER	% WITH ULCER
All cases	700	95	6.4
Emphysema	64	12	19.0
Carcinoma of prostate	36	2	5.5
Hypertensive disease	52	2	3.9
Bronchogenic carcinoma	42	7	17.0

From the Department of Surgery, Medical College of Alabama.

Submitted for publication March 10, 1958 while the authors were fourth-year medical students.

The authors express indebtedness to Dr. Champ Lyons for advice and suggestions in the preparation of the manuscript.

A series of 586 patients having pulmonary emphysema was reviewed by Latts, Cummins and Zieve.¹⁵ Four hundred seventy-nine were diagnosed on a clinical basis. Peptic ulcer was present symptomatically in 37% and proven in 15%. In 107 patients diagnosed as having emphysema at autopsy, 43% were suspected of ulcer on a clinical basis and ulceration was found in 27%. Of the autopsied patients, combined gastric and duodenal ulcers were present in one-fifth of the proven ulcer patients. The remaining ulcers were equally divided between the stomach and the duodenum. It was concluded that two-fifths of patients hospitalized with emphysema had symptomatic peptic indigestion and that ulcer (gastric, duodenal, or combined) was present in one-fifth of the series. The observed incidence was nearly 3.6 times the chance value. In another series of 42 autopsies on patients with emphysema, Fulton¹⁴ found an 18% incidence of peptic ulceration. Lowell¹⁶ reported a series of six peptic ulcers occurring in 25 patients with severe pulmonary emphysema.

Weber and Gregg¹⁷ identified the problem of increased surgical risk in the patient with emphysema and benign gastric ulcer. This led to a review of all patients admitted during a 5-year period to the Veteran's Administration Hospital, Aspinwall, Pennsylvania, with a proven diagnosis of benign peptic ulcer. Chronic pulmonary disease, chiefly emphysema and/or fibrosis, was identified in 43% of 70 patients.

THE RELATIONSHIP BETWEEN ELEVATED BLOOD CO₂ AND HCL PRODUCTION BY THE STOMACH

In 1931 Apperly and Crabtree² found that breathing air with increased CO₂ content produced an increased secretion of gastric acid. Brown and Vineberg,³ in studies on dogs, correlated gastric secretory inhibition with hyperventilation and restored secretory activity by increasing the CO₂ content of the inspired air. Both of these observations demonstrated a relationship between CO₂ content of the blood and the production of HCl by the stomach. It is significant that these studies are acute experiments and the results are apparent before significant electrolyte shifts could have occurred. Other confirmatory experiments identify the increased relationship between blood and tissue tension of CO₂ and the production of gastric acid.⁴

The exact mechanism of HCl secretion by the parietal cells of the stomach remains incompletely understood. Davenport^{7,8,9} identified a high con-

centration of carbonic anhydrase in the parietal cells as the distinguishing feature of these cells in comparison with other gastric cells, and suggested that carbonic anhydrase mechanisms are essential to HCl production.^{5,6} This viewpoint has been endorsed in recent reviews of the subject.¹⁸ It was initially proposed by Davenport that CO₂ is quickly hydrated to carbonic acid by carbonic anhydrase. Upon ionization of the carbonic acid the hydrogen ions are concentrated and secreted while the bicarbonate ions pass into the blood in exchange for chloride ions. (Reverse chloride shift.) The chloride ions are secreted along with the hydrogen ions. More controversial is the mechanism whereby the H⁺ ion is concentrated and selectively secreted.

The rate of known production of HCl in the stomach has engendered discussion as to the essentiality of carbonic anhydrase.^{10,11} Davis and Roughton¹² have shown by calculation that the quantitative aspects of HCl production require the presence of carbonic anhydrase in the parietal cells. It would appear that the carbonic anhydrase content and the ability of the parietal cells to excrete HCl constitute an important accessory mechanism for the maintenance of blood pH.

DISCUSSION

There is sufficient clinical and autopsy evidence to define a relationship between chronic pulmonary insufficiency and peptic disease. CO₂ retention offers an insight into the mechanism whereby increased gastric secretion of HCl may be produced. The parietal cells of the stomach are ideally suited for the buffering process required to maintain a stable blood pH when excess CO₂ is present in the blood. It seems likely that this buffer mechanism would be more important in the presence of diminished renal function in the older age group with emphysema and pulmonary fibrosis.

It is believed that this homeostatic mechanism requires only moderate renal impairment and CO₂ retention for its activation. The experimental and clinical evidence reviewed herein suggests that polycythemia and established respiratory acidosis are later stages of compensation in the course of pulmonary insufficiency. Clinical studies of this problem should identify reduced pulmonary function, moderate renal impairment, and gastric hyperacidity as the essential features of the process.

It is believed that an awareness of these mechanisms may be helpful in the management of peptic indigestion in patients with reduced pulmonary function. In many of these individuals proper pulmonary management may be more important than the administration of antacids.

CONCLUSIONS

1. There is a correlation between chronic pulmonary insufficiency and peptic disease of the esophagus, stomach and duodenum.
2. Excess CO₂ in the blood produces an increase in gastric secretion of HCl.
3. There is an implication for the treatment of pulmonary insufficiency when peptic indigestion complicates emphysema or pulmonary fibrosis.

BIBLIOGRAPHY

1. Apperly, Frank L.: Peptic Ulceration in Pulmonary Emphysema, *Am. J. Digest. Dis.* 1: 270 (June) 1956.
2. Apperly, Frank L., and Crabtree, M. G.: The Relation of Gastric Function to the Chemical Composition of the Blood, *Am. J. Physiol.* 73: 22, 1931.
3. Browne, J. S. L., and Vineberg, A. M.: The Interdependence of Gastric Secretion and the CO₂ Content of the Blood, *Am. J. Physiol.* 75: 364, 1932.
4. Clark, Byron B., and Kurtz, Leonard D.: The Inverse Relationship of the Secretion of Hydrochloric Acid to the Tension of Carbon Dioxide in the Stomach, *Federation Proc.* 5: 188 (March) 1946.
5. Davenport, H. W., and Fisher, R. B.: The Mechanism of the Secretion of Acid by the Gastric Mucosa, *Am. J. Physiol.* 131: 165, 1940.
6. Davenport, H. W.: The Secretion of Acid by the Gastric Mucosa, *Gastroenterology* 1: 383, 1943.
7. Davenport, H. W., and Fisher, R. B.: Carbonic Anhydrase in the Gastro-Intestinal Mucosa, *Am. J. Physiol.* 39: 171, 1938.
8. Davenport, H. W.: Gastric Carbonic Anhydrase, *Am. J. Physiol.* 128: 725, 1940.
9. Davenport, H. W.: Gastric Carbonic Anhydrase, *Am. J. Physiol.* 97: 32, 1939.
10. Davenport, H. W.: In Memoriam: The Carbonic Anhydrous Theory of Gastric Acid Secretion, *Gastroenterology* 7: 374, 1946.
11. Davenport, H. W.: Carbonic Anhydrase in Tissue Other Than Blood, *Physiol. Rev.* 26: 560, 1946.
12. Davies, R. E., and Roughton, F. J. W.: Acid Production by Isolated Mucosa, *Biochem. J.* 42: 4, p. 618.
13. Dundee, J. C., and Green, P. T.: The Association of Chronic Pulmonary Emphysema with Chronic Peptic Ulceration, *Canad. M. A. J.* 67: 438 (Nov.) 1952.
14. Fulton, R. M.: The Heart in Chronic Pulmonary Disease, *Quart. J. Med.* 22: 43, 1953.
15. Latts, Elliot M.; Cummins, J. F., and Zieve, Leslie: Peptic Ulcer and Pulmonary Emphysema, *A. M. A. Arch. Int. Med.* 97: 576-584 (May) 1956.
16. Lowell, F. C.; Franklin, W.; Michelson, A. L., and Schiller, I. W.: A Note on the Association of Emphysema, Peptic Ulcer and Smoking, *New England J. Med.* 254: 123 (January 19) 1956.
17. Weber, J. M., and Gregg, L. A.: The Coincidence of Benign Gastric Ulcer and Chronic Pulmonary Disease, *Ann. Int. Med.* 42: 1027 (May) 1955.
18. West, E. S., and Todd, W. R.: *Textbook of Biochemistry*, Published by The Macmillan Company, New York, 1957.

New Study Suggests Possible Cause of Schizophrenia

—A new avenue of investigation into possible chemical causes of the mental illness schizophrenia has been suggested by a Harvard Medical School researcher.

Dr. Samuel Bogoch has found that adult schizophrenics have considerably less neuraminic acid—a component of the brain's gray matter—in the spinal cord fluid than do nonschizophrenics.

In fact, the levels of neuraminic acid in the cerebrospinal fluid of adult schizophrenics is “comparable only to values found in some children under seven years of age.”

The low values in adult schizophrenic patients may indicate a form of chemical immaturity of the nervous system. This failure in chemical maturity would correlate well with clinical evidence of a failure of psychological maturity in the schizophrenic, he noted.

Writing in the August Archives of Neurology and Psychiatry, published by the American Medical Association, Dr. Bogoch said that more studies must be performed before any definite conclusions can be drawn regarding the use of neuraminic acid levels for diagnosing schizophrenia.

Dr. Bogoch said there have been many attempts to show some chemical cause of schizophrenia through the study of blood and urine, but there has been no definite demonstration of a chemical disorder in the central nervous system proper.

Thus his findings present “an important new area for further investigation,” he said. One thing to be learned is the meaning of a lowered value of neuraminic acid in the cerebrospinal fluid.

He studied the neuraminic acid concentrations in the cerebrospinal fluid of 29 adult schizophrenic patients; 72 children under the age of seven years; 29 children between the ages of seven and 15, and 65 non-schizophrenic adults.

He found that low values in adults correlated well with the diagnosis of schizophrenia, whether it be an acute first attack or a chronic process of more than 10 years duration.

The exact function of neuraminic acid in the nervous system is not definitely known, Dr. Bogoch said. It appears to play some role in the functions of the “blood brain barrier,” which helps maintain the special environment of the brain.

He theorized that low neuraminic acid concentrations might affect the functioning of the barrier, which in turn could account for the brain's malfunctioning and the resulting psychotic state.

Furthermore, it may not be necessary to seek specific chemicals as causal agents of schizophrenia, he said. The “causal agents” may be normal substances produced by the body's physical and chemical process. These substances are usually prevented by the blood-brain barrier from coming into prolonged contact with the brain. However, if the barrier doesn't work correctly, the substances may contact the brain, interfering with its environment and producing mental illness.

Then the possession of an inadequately developed barrier system would represent a “specific vulnerability to psychosis,” he said.

Dr. Bogoch believes that this hypothesis can be proved or disproved. In addition, he said that tests are now underway to determine the effect of the administration of neuraminic acid itself and of neuraminic-acid-containing substances to psychotic patients.

Dr. Bogoch is associated with the neurochemical research laboratory of the Massachusetts Mental Health Center, and the department of psychiatry, Harvard Medical School, Boston.

Professional Training Urged for Physically Handicapped

—The investment of relatively small sums of money in the rehabilitation of handicapped persons for professions really pays off, a recent Oklahoma survey has shown.

In fact, professional workers in their working lifetimes will return to the state and federal government 60 times the amount of money invested in their rehabilitations, Dr. Jean S. Felton said.

That is his estimate of the amount to be paid in taxes alone by 190 persons now working in medicine and related fields after their rehabilitation by the Oklahoma State Division of Vocational Rehabilitation.

Because some people think that only craft, custodial or service workers are produced by vocational rehabilitation services, Dr. Felton surveyed the Oklahoma program between 1937 and 1957. He found workers in many professions, but studied carefully only those in medicine and related fields.

Dr. Felton, professor of preventive medicine at the University of Oklahoma School of Medicine, reported the study in the Aug. 16 Journal of the American Medical Association.

The 190 handicapped persons were placed in 16 medical or paramedical categories. Fifty-two became nurses (professional and practical); 35 laboratory technicians; 18 dental technologists; 17 physicians and 14 x-ray technicians.

There were 26 different disabilities, the greatest number being stable pulmonary tuberculosis (22.1 per cent). Others were polio after effects, 13.2 per cent; bone and joint disorders, 10.5 per cent, and visual defects, 8.4 per cent. Of the former tuberculosis patients, 62 per cent became laboratory or x-ray technologists.

The overall cost—paid by tax funds—for rehabilitating the patients was \$95,470, which averaged \$533 per person, with a range from no cost to \$5,282. Expenditures were made for training, physical examinations, prosthetic fees, doctors' fees, maintenance and supplies.

Not all clients represented direct costs, Dr. Felton said, since some received services, such as counseling, with no attached cost except overhead. The largest individual expenditure was for a patient who was assisted through medical school.

Dr. Felton estimated that the 190 persons would earn more than 34 million dollars from the time they completed training until they retired at 65. They would pay income taxes of more than 5 million dollars to the federal government and more than \$170,000 to the state.

Childhood Called Best Time to Have Mumps

—There is much less likelihood of infection after exposure to mumps than to measles or chickenpox, a San Francisco physician said recently.

This “low order of communicability” probably accounts for the fact that so many adults escape the disease during childhood only to develop it in later years, Dr. Edward B. Shaw said in the Aug. 2 Journal of the American Medical Association.

The best time for a person to have mumps is during childhood, when the possible complications are not very severe. In adulthood, mumps can be followed by serious—and sometimes lasting—complications.

In order to prevent the possibility of severe adult infections, it might be desirable to deliberately expose a child to the disease, thus insuring lifelong immunity, Dr. Shaw said.

However, this introduces the potential risk of secondarily exposing adults who may then have the illness with greater severity and sometimes permanent damage.



CHARLES ALSTON THIGPEN

IN MEMORIAM

Whereas, Death has claimed our distinguished fellow member, Charles Alston Thigpen, M. D., better and affectionately known as "Dr. Charlie"; and

Whereas, His brilliant career as a specialist in his chosen field, as a former president of the Medical Association of the State of Alabama, and member of its governing body, the State Board of Censors, reflected great credit upon this Society; and

Whereas, The high esteem in which he was held in all circles in which he moved enabled him to exert a favorable and powerful influence upon his profession and his community; therefore be it

Resolved, That, in his passing, the Medical Society of Montgomery County has lost a most valuable member; and the profession of the state and nation a consecrated fellow physician; and be it further

Resolved, That the Society pause to pay tribute to the memory of "Dr. Charlie"; and be it further

Resolved, That a copy of these resolutions be sent to Dr. Thigpen's family, that they be printed in the Journal of the Medical Association of the State of Alabama, and that they be made a part of the permanent records of this Society.

RECOGNITION OF ACCESSIBLE CANCER

GUEST EDITORIAL

Harry W. Southwick, M. D.

Chicago

Accessible cancer does not delineate as small a field of the practice of medicine as might at first glance be imagined. The title was chosen deliberately to emphasize two points: 1. The majority of cancer affecting the human body lies in accessible areas; 2. The realization that this is so and the early recognition of the disease can lead to an important improvement in the salvage of human lives.

To be most effective, the treatment of cancer should be instituted at the earliest possible time. This presupposes active cooperation between the patient and his physician to establish an early diagnosis.

Editorials

The American Cancer Society has exercised commendable initiative in endeavoring to alert the lay public to certain "danger signals" which suggest a deviation from the normal and which may be associated with malignancy. These potential patients are encouraged to seek the advice and treatment of a physician whenever any of these signs appear. Among them are: 1. any sore that does not heal; 2. a lump or thickening in the breast or elsewhere; 3. unusual bleeding or discharge; 4. any change in a wart or mole; 5. persistent indigestion or difficulty in swallowing; 6. persistent hoarseness or cough; 7. any change in normal bowel habits. The Society has been meticulously conscious of emphasizing the fact that one of the danger signals may not mean cancer, but it must mean consultation and evaluation by a properly qualified physician.

It is the physician's responsibility to be alert to the possibility of cancer, to recognize it, and to institute proper diagnostic and therapeutic measures. Cancer is often considered remote and obscure. Serious reflection, however, will reveal that this is not the case. The diagnosis of cancer is not a difficult one if it is considered as a possibility and a biopsy is performed, particularly when there is any doubt.

Cancer can be within the diagnostic reach of the alert physician in a number of ways. The lesions can be visible to the naked eye by direct vision, such as lesions of the skin and the oral cavity. The tumor mass may be palpable directly, such as masses within the various soft tissues, including the breast, subcutaneous tissues, abdomen and rectum. Direct visualization with the aid of simple instruments such as the vaginal speculum, bronchoscope and proctoscope add a number of other lesions to the group of accessible malignant tumors. When optical lenses are added to certain instruments such as the cystoscope and gastroscope, additional lesions fall into the field of accessible cancer. Finally, with x-rays added for visualization of tumors within the lung fields and gastrointestinal tract, it can be realized that almost 85% of the malignant disease affecting the human body is, in the broadest sense, accessible.

There are only two methods of treatment of can-

cer known today which offer any opportunity for the cure of the disease. One of these is surgery and the other irradiation. Some forms of the disease respond essentially equally well to either modality while others carry a much more favorable prognosis when surgery or irradiation is the exclusive definitive form of management. Chemotherapy in any form known today at best offers some palliation and may delay the ultimate fatal outcome. At worst, this form of treatment may actually hasten the patient's demise. Treatment of a potentially salvageable tumor with chemotherapy as the primary and exclusive form of management cannot be too strongly condemned.

Cancer, even more than most cases of acute appendicitis, is a disease whose diagnosis is accessible to the alert physician. Through early recognition, prompt diagnosis, and proper management, the salvage rate for malignant disease should be considerably improved.

SOUTHEASTERN STATES CANCER SEMINAR

The Southeastern States Cancer Seminar will be held in Tampa, Florida, on November 19-21, 1958, at the Hillsborough Hotel. An outstanding three-day program has been arranged with a panel of nationally prominent guest speakers. These include Dr. J. P. Concannon, Associate Professor of Radiology, Jefferson Medical College, Philadelphia; Dr. A. Reynolds Crane, Professor of Pathology, Univ. of Pennsylvania School of Medicine; Dr. Ruben H. Flocks, Professor of Urology, Iowa State Univ. School of Medicine; Dr. Simon Kramer, Co-Director, Dept. of Radiation Therapy and Radioactive Isotope Laboratories, Jefferson Hospital, Philadelphia; Dr. Stanley L. Lane, Albert Einstein College of Medicine, New York; Dr. J. V. Meigs, Harvard; Dr. J. L. Pipkin, Baylor; Dr. James Rives, Louisiana State; Dr. H. E. Schmitz, Loyola; Dr. Max M. Strumia, Univ. of Pennsylvania, and Dr. Kenneth L. Warren, Lahey Clinic.

All physicians are cordially invited to attend and credit is given by the American Academy of General Practice for postgraduate training. There is no registration fee.

NEW GOALS OF NATIONAL FOUNDATION

The National Foundation for Infantile Paralysis has dropped the reference to a specific disease in its title and will be known in the future as The National Foundation.

Projected plans center on the development of an organized voluntary force in the fields of medical research, patient aid, and professional education, flexible enough to meet new health problems as they arise.

The first new goals will be research and even-

tually a patient aid program in arthritis and congenital malformations. Virus research will be continued and expanded as will the investigations currently being conducted into the disorders of the central nervous system.

No attempt will be made to duplicate the work of other voluntary agencies, Basil O'Connor, President of the organization said, although as scientific breakthroughs occur they will be pursued wherever they lead, with the general objective the improvement of man's health.

All five areas of the expanded program will be financed through the traditional March of Dimes conducted annually in January.

The new program was adopted after five years of exhaustive investigation of areas of need in the health field and careful assessment of the strengths of the National Foundation that could be applied to other problems. Conferences were held with medical, civic and governmental leaders, as well as with representatives of National Foundation Chapters from all regions of the country. The Board of Trustees approved the program on May 28, 1958.

The National Foundation, during its twenty years of service in the field of health, has given a unique demonstration of the effectiveness of combined medical and lay leadership formed into a partnership on both national and local levels to combat disease.

The keynote of the National Foundation's future program will be research. At this moment virologists have uncovered clues pointing to problems little dreamed of ten years ago. Freedom to follow research clues wherever they lead will be combined with necessary limitations on patient aid in the beginning.

The limitations result from the enormity of the problem: at least 11,000,000 persons have arthritis and rheumatism; 250,000 children are born each year with significant congenital malformations (excluding birth injuries), and an estimated 150,000 persons who have had paralytic polio will require some assistance in the years ahead.

The National Foundation plans to offer patient aid at first only to arthritis patients through 18 years of age and to children suffering from malformations of the central nervous system, also through age 18. Rheumatoid arthritis, the most serious of the rheumatic cripples, annually affects an estimated 30,000 children and adolescents of whom some 16,000 can be expected to seek treatments each year. It is planned to work primarily with this group in the beginning because the most good can be done for them and the most learned of benefit to all arthritis sufferers.

Some 8,000 patients with treatable defects of the

central nervous system will also be aided. Among these conditions are spina bifida, encephalocele, and hydrocephalus. Although children with congenital mental retardation will not be among those aided, there is strong evidence that the research programs now under way will contribute to ultimate prevention and treatment of this problem.

National Foundation research grantees, working in the field of cellular biology to find tissue culture cells in which polio virus could be grown, have discovered new knowledge about cell behavior. This knowledge, in turn, focused attention on abnormal cells which, it is believed, account for at least half of the significant congenital malformations. It is suspected that the other half is caused by infections or injury to the embryo during pregnancy.

Achievements in the rehabilitation of severely disabled polio patients will have renewed meaning when these professional skills are applied to arthritis patients as well as to persons handicapped by congenital malformations.

The National Foundation's professional education program of tomorrow will continue its flexible structure, functioning essentially through the channels of scholarships and fellowships; assistance to professional schools, associations and agencies and production and distribution of research and teaching aids.

Public demand for new efforts on the part of the National Foundation has been constant since it became evident, in 1955, that the control of paralytic polio was in sight. A steady stream of requests from the general public, physicians, public health authorities and officers and board members of a number of other voluntary health agencies have been received, all asking that the National Foundation apply its experience and skill to fight for the health needs of the nation.

On May 21, 1958, the 50th Annual Governors' Conference, meeting in Miami, expressed the nature of the public demand with a unanimously-passed resolution calling upon the National Foundation to "keep intact and expand its meaningful voluntary association, in order to continue its service in new areas of scientific research and to assist medical science to meet and conquer other unsolved diseases which plague mankind."

As a result, the National Foundation has chosen the broad objective of an organized force for medical research, patient care and professional education.

Through it, the hope is that infantile paralysis one day may be considered only a fortunate beginning.

ARTHRITIS FOUNDATION COMMENTS ON POLIO ANNOUNCEMENT

Floyd B. Odlum, National Chairman of The Arthritis and Rheumatism Foundation, has issued the following statement regarding the announcement of the National Foundation for Infantile Paralysis of its plans to enter other fields of health:

It is gratifying that Mr. Basil O'Connor and the National Foundation for Infantile Paralysis have recognized the importance of arthritis as the Nation's Number One Crippler. At the same time, it is regrettable that they should not have seen fit to join forces with The Arthritis and Rheumatism Foundation in order to utilize our medical and scientific resources to carry on the advances we have achieved to date and thus to present a unified front to the problems of arthritis.

"In the ten years of its existence The Arthritis and Rheumatism Foundation has been the leading sponsor of medical and scientific work in this field. It has more than 50 chapters throughout the Nation; its membership includes virtually all of the leading medical and research people in the field of arthritis and rheumatism; it enjoys the closest possible working relationship with the American Rheumatism Association, the professional body of 1,200 arthritis specialists in the United States; it works closely with the National Institute of Arthritis and Metabolic Diseases of the U. S. Department of Health, Education and Welfare.

"Some months ago I had expressed the hope that the National Foundation for Infantile Paralysis would adopt arthritis as its single new field of activity. Discussions were initiated looking towards that objective. They were continued even when it was evident the National Foundation intended to enter several health fields. I believe that if we could have obtained adequate assurances from Mr. O'Connor that our work in arthritis would be progressed and not retarded by a merger of the two Foundations, our medical, scientific and lay leadership would have welcomed an amalgamation in the interest of science and medicine.

"While some general assurances in this respect were available, they unfortunately were not specific enough to be acceptable to our Foundation and its various chapters. With the National Foundation for Infantile Paralysis entering a number of broad fields of medicine, our leadership feared that most of the funds to be raised by the National Foundation would be devoted to fields other than arthritis. We understand there is still much money to be spent on polio and of course the virus diseases present a very broad field of work that has not yet been well defined.

"Also there were important differences between the two Foundations with respect to the amount

of participation given to the medical and scientific personnel in the formulation of policies. Our physicians are an integral part of our policy-making groups.

The Arthritis and Rheumatism Foundation observes its 10th Anniversary this year. Its purpose has been, and will permanently remain, to wipe out the Number One Crippler.

"We are greatly encouraged by the progress that has been made over the last decade. I confidently expect that within another ten years our research people will track down the cause of this disease and come up with a final cure.

"The Arthritis and Rheumatism Foundation through its more than 50 chapters will conduct its campaign for funds next November as it has in the past ten years.

"Arthritis, with more than eleven million sufferers in this country alone is a far more serious disease than most people realize. Perhaps the decision by the National Foundation to enter this field will help bring this realization to the people generally."

AMERICAN COLLEGE OF GASTROENTEROLOGY

Annual postgraduate course in gastroenterology, sponsored by the American College of Gastroenterology and under the supervision of Dr. Owen Wangenstein, as surgical coordinator, and Dr. Isidore Snapper, as medical coordinator, will be held at the Jung Hotel, New Orleans, on October 23-25. This has been approved by the Academy of General Practice for Category II credits.

Mobile Electroencephalograph Described—Mobile units have become popular as a way of bringing better medical care to people in out-of-the-way places. They have been used in programs dealing with chest x-rays, hearing and speech disorders, diabetes detection, and blood donation.

Now the Michigan Epilepsy Center and Association has a mobile unit for the evaluation of epileptic patients.

The unit carries an electroencephalograph, the delicate instrument that measures the electrical activity of the brain. One of its main uses is in helping to determine the degree and type of epilepsy a person has.

Writing in the Aug. 2 Journal of the American Medical Association, three officials of the Michigan organization said they know of no other reported instance in which a mobile clinic uses the EEG instrument.

The program originated in 1951. For 10 weeks each year the unit tours areas without facilities for the study of epilepsy. Local physicians refer their patients to the unit for EEG readings and neurological investigation.

A neurologist at the Detroit center then reviews the patient's EEG reading, his history, copies of previous medical reports, and information from the local doctor, and sends suggestions to the patient's physician.

The authors noted that the unit's visits have helped stimulate interest within communities for permanent facilities to provide more complete evaluation and treatment for the epileptic patient.

The authors are A. L. Rolfe, M. S. W., A. J. Derbyshire, Ph. D., and Z. Stephen Bohn, M. D., of the Michigan Epilepsy Center and Association, Detroit.

Rules Listed for Healthful Foreign Travel—Strange foods, meals off schedule, and excitement can add up to a terrific stomach-ache, if a person doesn't know how to keep fit abroad, according to a Today's Health article.

Before traveling abroad, a person should take a few precautions to protect his health, but he shouldn't let unnecessary fears ruin his trip.

Some suggestions for keeping fit were outlined by Ray Vicker, a Chicago writer, in the August Today's Health, an American Medical Association publication.

Before leaving, a person must have a smallpox vaccination, since a vaccination no older than three years is necessary for re-entry into the United States. Moreover, many countries require a vaccination for entry.

A few Latin American countries also require a personal health certificate issued by a physician. Even if a certificate is not necessary, it might be advisable to have a physical examination prior to departure, Vicker said. The doctor can recommend any special precautions for health protection and can advise on the preparation of a first aid kit.

If a person is going to a country outside Europe, he should have yellow fever and cholera immunizations and perhaps a tetanus shot, he said.

Vicker noted that drinking water is safe in most of the big cities of Europe and many of the small. However, when in doubt, a person should drink bottled water. Ice cubes should be skipped unless they are known to be made from pure water. If water cannot be boiled it can be treated with a chemical in tablet form.

Stomach upsets, common to travelers, are often caused by contaminated food or water, eating indiscretions, or eating habits upset by time changes. Vicker suggested that a person take with him kaomagna, kaopectate and bismuth-pectate preparations for such difficulties.

Unless milk is boiled, it should be avoided in many countries. The exceptions are Australia, New Zealand, Great Britain, Holland, Belgium, Switzerland, and the Scandinavian countries. In India, Malaya, and certain other countries, hot milk is served on cereal. This is a sign that the milk has been boiled, the author said.

Ice cream, butter, and fresh cheese are also taboo if the milk in a country is unsafe. And in the tropics, the taboo should be extended to include cold pastries, custards and meringues.

In preparing a first aid kit, a traveler should include sunburn lotion, aspirin, lotion for insect bites, and adhesive bandages, in addition to remedies for stomach upsets, seasickness, and malaria.

Simple Rules for Care of Burns Listed—To minimize pain and suffering from burns—which cause more injury and death among children than any other accident—parents need to know how to identify and treat them.

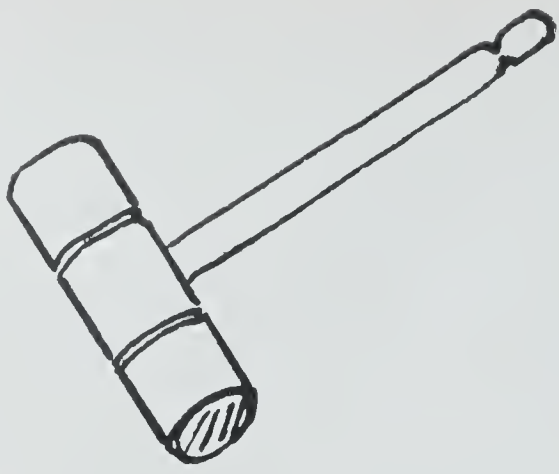
Some rules, listed in the July Today's Health, an American Medical Association publication, are:

—Because youngsters grasp anything within reach, never allow conditions to exist which lead to accidents; keep matches from children; keep pots from the edge of the range, and keep youngsters from fires.

—Determine quickly the degree of burn—first degree, the skin is red; second, the skin is blistered; third, the skin is charred.

—For first or simple second degree burns, coat the affected area with an antiseptic ointment or olive or baby oil. This relieves pain and prevents the skin from cracking and drying out.

—For deep second and third degree burns, call a doctor immediately, since shock and infection may occur. A layman should not try to treat either.



President's Page

THE THIRD PARTY

A Third Party has been introduced into our one time peaceful practice of medicine. His rather brief tenure (only about 15 years) does not allow us to dignify his presence by describing him as a part of an eternal triangle as we do the third party in our domestic affairs. Still his presence has created problems and upheavals that threaten the practice of our profession and even our democratic way of life. To describe this person, he is an individual, trade union, government agency or the like who collects a sum of money by excise or taxation and uses these funds to purchase medical service from one party, namely, the doctors and hospitals, for the benefit of the second party, which can be any collected group of people. The plan seems simple and its proponents offer many reasons why it should be universal. They tell you that in this day of increased medical costs they provide free or almost free medical care for people who otherwise would find this care a financial burden. They glibly overlook the fact that the money they handle so freely does not grow on trees but comes from taxation or excise and eventually is distributed over all of our shoulders. The parties benefited, other than being members of the general population, are usually not touched by the processes of fund raising. Since they have not felt any deprivation as the money was collected, they look on any benefit they receive as a windfall, a hand out or a wonderful gift from the fund. The managers of the fund are quick to exploit this benign goodwill to exalt the esteem and powers of themselves, the Third Party. If the monies in any fund were collected solely by dues spread evenly over the groups benefited, it is interesting to speculate on their estimation and respect for this Third Party. Perhaps it would have a salutary effect on his stewardship of their funds. Those in charge of the funds have also claimed that they can select better medical care and eliminate those doctors who are incompetent and those who overcharge their patients. The first argument presumes a supreme wisdom in the present and succeeding generations of the Third Party. To the second argument we must admit that some doctors do overcharge. I suppose that it will always be so that a few will abuse the privilege of freedom. We shall always

find in the offices of our government, labor unions, as well as in our profession, a few who abuse the trust of the public for their own gain. The Third Party system encourages this immorality in doctors. We find doctors charging up to and above the fee schedule allowed by certain contracts when usually they charge less for similar services, because the money comes from a fund or bureau and there is no direct connection with the person served. Compare this with the two-party system. A young man struggling to support his wife and a new baby calls a doctor to treat one of the family. An overwhelming majority of the doctors will appraise the situation and make an appropriate charge. The wise doctor in the interest of getting his patient well will make some charge, however small it may be, and having done so achieve an inward satisfaction that is one of the great rewards of our profession.

What other effects will this system have on our profession? Certainly that powerful and healthy incentive that grows out of the confidence a patient puts in you when he selects you as his physician will be lost. This incentive is the thing that makes us get up at night when we are near exhaustion; makes us give the added personal attention. Many times I have seen doctors whose services have been contracted for by a Third Party in the form of an industry, union, military service or the like lose this incentive to become clock watchers and look at the patients in the waiting room as work to be disposed of as rapidly as possible. They may retain an active interest in the scientific aspects of medicine but in time this interest tends to wane. Also there is some question whether young men will go through the long and expensive training that is necessary to become a doctor of today's high standard if they see that they will be subjected to the control of some powerful Third Party. Only recently I saw where the doctors in Vienna struck because they felt that they were not being dealt with fairly by the Third Party. It is inconceivable that doctors in our country would strike against serving ill people but if a doctor loses his freedom and is subject to regimentation his attitude might change.

Finally, where will the patient fit in this picture? For one thing he will lose his right to select

his own physician. This act of selecting his own physician creates a confidence on the part of the patient which goes a long way toward curing his illnesses, whether they are organic or functional. This right to select a physician is as much a part of our democratic way of life as is our right to select our religious faith, an automobile or to vote. It has been suggested by dictators and Third Parties that these democratic processes are not efficient. They claim that they can shift masses of people, assign technical help, eliminate the incompetent and produce a more powerful nation. In so doing, however, they may lose that latent strength that grows in an individual who knows that he can stand on his own feet and make his own decisions and selections within the law.

What steps should our profession take to combat the efforts of those who wish to make this change? First, we must realize that the cost of medical treatment has increased and the public has to prepare for it. We should encourage voluntary health insurance. Personally I feel that it should be written as an indemnity which is paid to the patient so

that he can meet the obligation he has incurred with the physician of his choice. I also feel that the indemnity should not be full coverage but should aim to cover the real burden of the expense but leave the patient with some responsibility. We should continue to police our own ranks as we have in the past to restrain those doctors who would abuse the system. A well run grievance committee can be most effective. We should discourage those salesmen of insurance who mislead the public into believing they are buying full coverage for all illness when this is not the case. We should continue to give our services to the indigent as we have in the past although it becomes necessary for various government agencies to meet the hospitalization costs. I feel that our present system is good and worth fighting for.

Colgan J. Furman



ORGANIZATION SECTION

COMMITTEE ON BLUE CROSS-BLUE SHIELD

In pursuance to a resolution which was passed by the Association in April, each specialty group in the state was asked to appoint a representative to serve on an Advisory Committee to the Committee on Blue Cross-Blue Shield of the State Medical Association. Dr. Haywood S. Bartlett, chairman of the constituted committee of the Association, contacted all specialty group representatives and requested that they mail to him not later than September 1 their suggestions for non-surgical procedures and fees to be included in the Blue Cross-Blue Shield contract. As this issue of the *Journal* goes to press, Dr. Bartlett reports that he has heard from almost all of the representatives and that each one has said he would discuss the matter with his group and try to report by the designated date.

Members of the Advisory Committee are: Drs. Joseph M. Humphries (Pediatricians), William D. Anderson (Radiologists), W. O. Romine (Anesthesiologists), Wood S. Herren (Internists), Weldon Ray (General Practitioners), Samuel C. Little (Neurologists and Psychiatrists), J. D. Bush

(Pathologists), Karl Benkwith (Ophthalmologists), and Paul Reque (Dermatologists).

As soon as all specialty group recommendations are received, the Committee on Blue Cross-Blue Shield will review the requests and a general meeting of the committee and advisory group members will be held for the purpose of discussing the requests and ironing out any difficulties which might have arisen. After all recommended procedures and fees have been reviewed and agreed upon by this group, they will be presented to the Board of Blue Cross-Blue Shield for its consideration.

COMMITTEE ON PUBLIC RELATIONS

Doctor Needs of the State

The August 1958 issue of the *Journal* carries under Organization Section a report of the survey which was conducted by the State Medical Association and the Alabama Academy of General Practice to determine the physician-population ratio of the state. Dr. Richard O. Rutland, Jr., Fayette, has made an analysis of the survey data and has come up with some interesting observations and

conclusions. His paper, which reports his findings, will be printed in the November-December issue of the *Alabama General Practitioner*.

Dr. Rutland is Chairman of the Subcommittee on Physician Placement of the Association and Chairman of the Committee on Education of the Academy. The work of these two committees is interrelated, and Dr. Rutland's article is recommended reading for every physician in the state.

BUREAU OF MEDICAL SERVICE
Committee on Aging

The Committee on Aging, a new committee of the Association, held its first meeting on August 3. Dr. J. J. Kirschenfeld, Fort Deposit, chairman of the group, presented a comprehensive program, as follows:

I. Background

A. A. M. A. Joint Council on Aging formed to improve the health care of the aged.

1. Includes American Medical Association, American Dental Association, American Nurses Association and American Hospital Association.

2. General program adopted.

a. To identify and analyze the health needs of the aged—1/12 of the U. S. population over age 65. Forty-eight to fifty-five per cent have chronic disease. Fourteen per cent cannot work. Approximately 4% are institutionalized. They spend an average of 2.6 days per year in the hospital. They occupy 22% of the long term hospital beds and 80 to 90% of nursing home beds. Their average cost for health care is \$170.00 to \$200.00 per year. The leading causes of death are heart disease and circulatory disturbances, cancer, accidents, arthritis and rheumatism and mental disease. Two-thirds are due to circulatory disturbances.

b. To appraise available health resources.

c. To develop programs for the best health care for the aged regardless of economic status.

d. Oppose compulsory federal programs such as Forand Bill.

B. A State Committee on Aging appointed by each state medical association. The functions of this committee:

1. To act as liaison with other state medical organization committees and other agencies.

2. To work with voluntary lay organizations interested in the aging problem.

3. To educate the practicing physician on recent developments related to aging and also alert them to the help available from the social and governmental agencies.

4. To work with governmental (local, state and

federal) agencies in regards to legislation and other projects. Advisory capacity.

5. To explore the efforts in field of housing for the aged by state and local governments.

6. To determine what hospital and nursing home facilities are available and work with the interested agencies.

7. To help establish and advise geriatric clinics.

8. To explore feasibility of hospital insurance for the older people.

9. To work with industry and labor towards a more realistic retirement program.

C. Regional meetings on aging. There have been many of these since 1955. State committees are represented at these meetings. The next one is coming up in Chicago in September.

II. Scope of the Problem in Alabama

A. Extent of medical indigency in Alabama

1. Number of aged on welfare rolls—103,542. Average payment—\$38.56. Ten per cent receive a small additional hospitalization or medical care payment. Can receive \$10.00 per month maximum for medical care or \$60.00 per month for hospitalization if patient continues to live or \$100.00 per month for nursing home care. Average pensioner is 74 years of age and two-thirds are women. Twenty per cent of them require some type of medical care and 4% are bedridden. Fifty-nine per cent are white and 41% are colored. About 15% also receive O. A. S. I. payments. The requirements are: over age 65 and residence in Alabama for 1 year with less than \$5,000 in the homestead and \$1,000 in other resources.

2. Age 65 and over not on welfare rolls—8 to 10% of total population over age of 65. 140,738 are white, 66,577 are colored. Females approximately 25% more than males. No way of telling how they meet their medical needs (average \$200.00 per year). Percentage of doctor's patients who are over age 65 during 1 week of regular practice 25 to 30%. O. A. S. I. payments given to 398 out of a thousand over age 65. Old age assistance given to 434 out of a thousand.

B. Facilities available in Alabama

1. General hospitals. Only recently has there been an effort to have chronic disease hospitals attached to a general hospital. Very few. Would relieve congestion. New amendment to Hill-Burton law.

2. Nursing homes and homes for the aged. There are now 89 nursing homes with 2,000 beds. Should have 2 beds per 1,000 population or 6,252 beds. Jefferson County has 555 beds (25%), Mobile and Baldwin counties 336 (15%), Montgomery, Tallapoosa and Dallas counties 550 (25%). Very few

beds in the rural areas. Most recent survey in 1956 found a very poor situation. Beds were all full with long waiting lists. A great majority of the homes were old, frame construction, had been homes which were turned into nursing homes and were not designed for patients; the director was usually untrained, had no more than a grade or high school education; and the majority had no nursing or medical facilities. Very few were in a good state of repair and were fireproof. Medical care was given only if the patient asked for it. One-third to one-half of beds were unsuitable. One-half of the patients were on public assistance and all patients needed medical care. Twenty-seven per cent were bedridden and 14% were in chairs. There were no real recreational facilities and the food was poor to fair. No trained personnel. Conclusion was: plants were inadequate, lack of qualified personnel, lack of adequate medical care and lack of financial backing and should be connected with hospitals.

3. Other agencies supplying help to aged:

- a. Home nursing—practically unavailable. (Some in Jefferson County.)
- b. Home occupational and recreational therapy—practically unavailable.
- c. Free medical care for indigents—unavailable except in larger counties.
- d. Volunteer insurance programs—no coverage for the chronically ill and older age group.
- e. Dental facilities—unknown. To be explored with dental society.
- f. Indigent care hospital program—just begun last year. Experience shows that 1/5 of the indigent patients are over 65. Still inadequate.
- g. Voluntary agencies such as Masonic Home, religious organizations, community chests, etc. To be explored.
- h. Jefferson County Coordinating Council of social forces.
- i. Golden Age Club.
- j. Governmental programs.

(a) State Health Department programs since 1957.

- 1. Statewide program for early detection of chronic diseases. Pilot studies.
- 2. Inspection and higher standards for nursing homes. Slow.
- 3. Local facilities set up by Health Department for prevention and diagnosis of chronic illness. Limited.
- 4. Education and training of personnel; now have a consulting nutritionist and a consulting nurse for nursing homes.

5. Home nursing service. Limited.

6. Hill-Burton chronic disease facilities—54 new nursing home beds have been built and 261 planned. One hundred twenty chronic disease beds have been built and 167 planned.

7. Cancer clinics with hospitalization. These are mostly in patients over 65.

8. Division of Mental Hygiene with 7 centers for counseling and treatment of the aged.

(b) Committee on Aging of the State of Alabama.

k. National Institute of Health. Research and pilot studies. U. S. Public Health Service and American Hospital Association have launched a program to study chronic illness. The A. M. A. and A. N. A. have organized to encourage upgrading in nursing homes. National Conference of Homemaking Services, in conjunction with the Department of Health, Education and Welfare have organized voluntary organizations to make available homemaking services for the aged.

C. Possible programs

1. Voluntary insurance programs for both welfare and non-welfare aged.

2. Additional welfare funds. Federal old age assistance funds have been available up to \$6.00 per month times the number of cases receiving old age assistance or approximately \$600,000 per month. This has to be matched by state funds and must be given as direct vendor payments to supplier of medical needs for the old. Has never been taken advantage of in Alabama. Requires appropriation from Legislature.

3. Program of Pennsylvania State Medical Association Committee—suggested voluntary increase in O. A. S. I. contributions from 2% to 2¼% which would result in additional retirement fund of \$2,500 per individual which could be used for medical purposes. This would allow for average of \$250.00 per year for 10 years to pay for Blue Cross insurance and medical bills.

4. Organization of county committees on aging to organize local facilities.

5. Sounding out of drug firms for possible free supply of drugs for aged indigent.

6. Emphasis on a preventive program through education—

- a. Encourage hobbies.
- b. Prepare for old age while young.
- c. Regular physical examinations.
- d. Regular exercise.
- e. Moderation in diet and habits.
- f. Medical school teaching.

7. Question of duty of physician to hopeless, senile case.

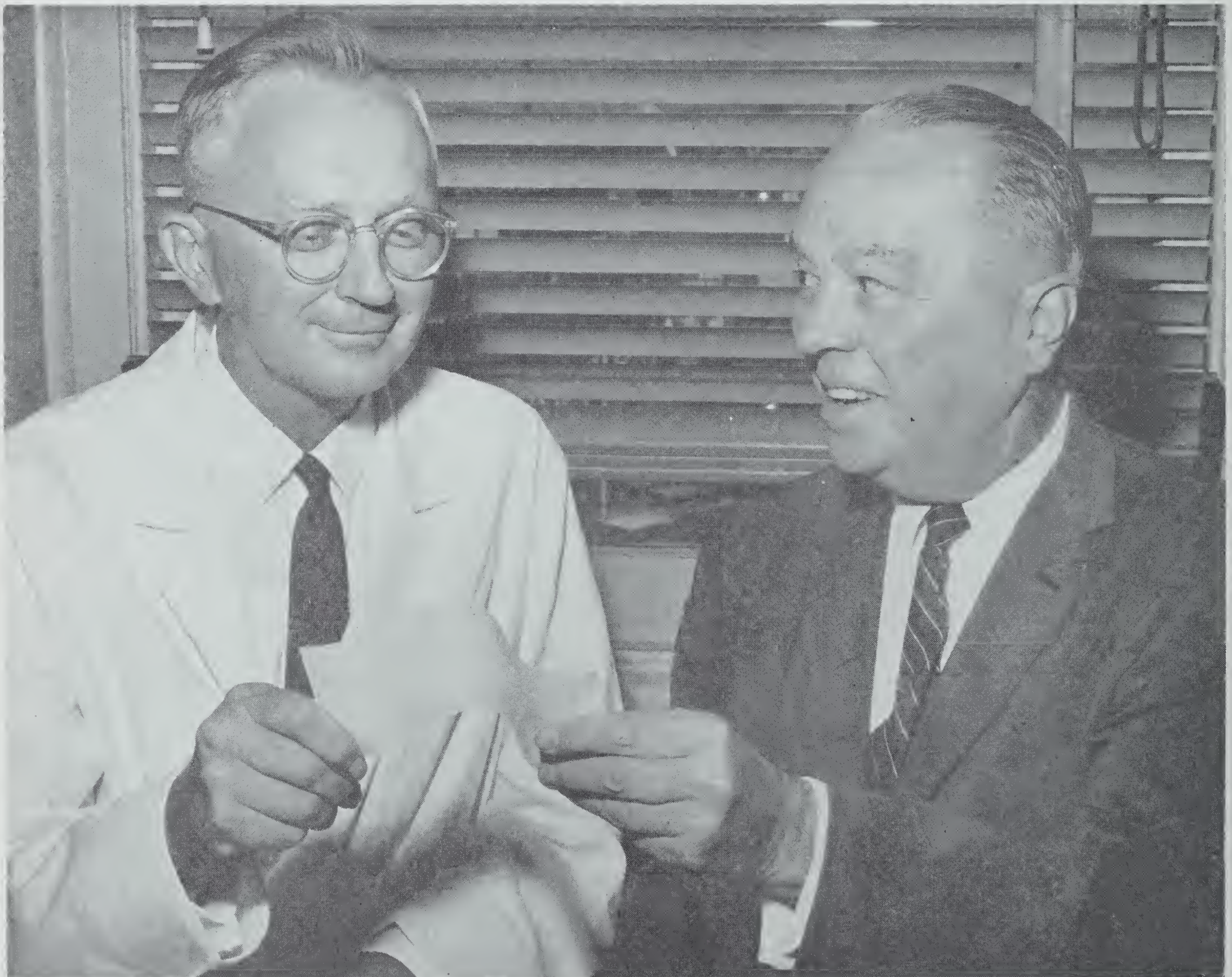
After thorough discussion of the proposed program, the committee expressed the opinion that the problems of the aged and the aging are many and that this committee should begin by working on those medical problems which arise. Two overall aims were endorsed: one, to determine how well we are meeting the medical needs of the aged and to determine what we can do to improve this situation; two, to determine what we can do to help in preparing a person to meet old age. It was further decided that the committee would limit its

beginning work to a consideration of the problems of those people 65 years of age and over.

Members who serve with Dr. Kirschenfeld on the Committee on Aging are Drs. Rhodes Johnston, Birmingham; Jean Clark, Vincent; J. F. A. McManus, Birmingham; and Ira Meyers, Montgomery. Their first duties will be to gather information on several of the items in the outline. Specific assignments were accepted at the August meeting, and committee members are now at work on the program.



MEDICAL CENTER NEWS



Dr. Holley is shown receiving \$5,000 check from Naylor Stone.

\$5,000 GRANT GIVEN TO UNIVERSITY BY
DAMON RUNYON FOUNDATION

Dr. Howard Holley, Associate Professor of Medicine, University of Alabama Medical College, was recently featured in a story in the Birmingham Post-Herald, when a grant of \$5,000 was awarded to the Medical College by the Damon Runyon Memorial Fund.

The check was presented to Dr. Holley by Naylor Stone, Post-Herald sports editor and longtime friend of Mr. Runyon's, who was himself a recent cancer victim. The award was made for the work being done in cancer research by Dr. Holley and provides for a cancer research bed for one year. It is the first such award received by the Medical College from the Foundation.

"It is highly gratifying to receive this award from the Damon Runyon Foundation, particularly because its stipulations will make it possible for us to carry on an unusual research project aside from mitigating the suffering of a cancer patient," Dr. Holley said.

"The Fund requests that the admitted patient be the type of case wherein something new will be learned by the techniques to be used. This fine award will greatly help our cancer program and on behalf of our College of Medicine and the whole state of Alabama, I extend our appreciation to the Damon Runyon Fund for its generous donation."

The check was sent here by Walter Winchell, treasurer of the fund, famous columnist and one of Damon Runyon's staunchest friends.

MEDICAL CENTER APPOINTMENTS

DR. JAMES PITTMAN, JR.

Dr. James A. Pittman, Jr., who last year was Chief Resident in Medicine at the Medical Center, joined the Department of Medicine in the Section of Endocrinology and Metabolism on a full-time basis July 1, 1958.

Dr. Pittman received his B. S. degree from Davidson College in 1948. Because of his scholastic record in college he was elected to membership in Phi Beta Kappa.

He received his M. D. degree from Harvard Medical School in June 1950, graduating cum laude and interned at the Massachusetts General Hospital, Boston, Massachusetts. From July 1, 1953 through June 30, 1954, he was Assistant Resident in Medicine at Massachusetts General and a Teaching Fellow in Medicine at Harvard Medical School.

For the next two years, from 1954 through 1956, he was a Clinical Associate in the Endocrinology

Branch, National Cancer Institute, National Institutes of Health in Bethesda, Maryland. At the same time he was Instructor in Medicine at George Washington School of Medicine.

In 1956 he became a Resident in Medicine at the University of Alabama and following this year as an Assistant Resident he became Chief Resident in Medicine, completing his tour of duty in June 1958.

Dr. Pittman is a member of Alpha Omega Alpha and the Boyleston Medical Society. He is now an Instructor in Medicine in the Department of Medicine.

DR. ABRAHAM SIEGEL

Dr. Abraham Siegel has been appointed Director, Biochemistry Section, Clinical Laboratories, at the Medical Center. He completed his postgraduate studies in the Department of Physiology at the Medical Center, where he did heart research on a Fellowship of the Alabama Heart Association, specializing in cardiac metabolism, as well as his teaching duties.

Dr. Siegel received his B. S. degree from the College of the City of New York, his Master's at New York University, and his Ph. D. in August 1957 at the University of Alabama.

Mrs. Siegel is Chief Neuropathology Technician in the Neurology Division of the Department of Medicine under the direction of Dr. Jolyon Tucker. The Siegels have three children, Dorothy, 11 years old; David, 7; and Richard, 5 years of age.

DR. FRANK A. BERG

Dr. Frank A. Berg has been appointed Instructor in Surgery at the University of Alabama Medical Center and will work with Dr. Leland C. Clark in the Heart Surgery Unit this coming year.

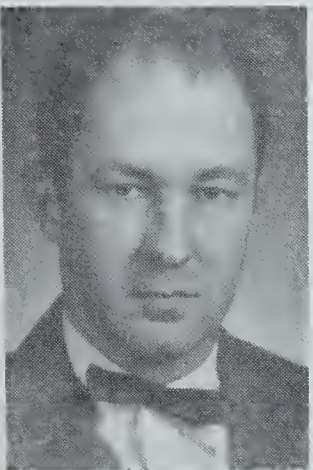
Dr. Berg is already a familiar figure at the Medical Center, having taken his internship here and also his four years of residency. He was Chief Surgical Resident last year under Dr. Champ Lyons, head of the Department of Surgery.

In addition to this work as a member of the heart surgery unit, Dr. Berg will be instructing medical students during the coming school year. He graduated from Hahnemann Medical College in Philadelphia, Pennsylvania, and will take his surgical boards this coming December.

Mrs. Berg (Dr. Ernestine Berg) has been on the staff of University Hospital as Assistant Professor of Anesthesiology since 1946 and will take her boards in the very near future.

DR. LELAND CLARK

Dr. Leland C. Clark, Jr., has been appointed Associate Professor of Biochemistry in the Depart-



Dr. Pittman

ment of Surgery at the University of Alabama Medical Center.

Dr. Clark is well-known for his work in basic research on the brain and heart and is the inventor and developer of the Clark Oxygenator, used in advanced cardiac surgery. He is the author of the new book "Extra-Corporeal Circulation" which is a collection of heart-lung research data throughout the world and is also the author of 70 other publications in his field.



Dr. Clark

Dr. Clark received his B. S. degree from Antioch College at Yellow Springs, Ohio, and his Ph. D. degree from the University of Rochester School of Medicine and Dentistry, Rochester, New York.

He and Mrs. Clark are the parents of four girls, Susan, 16; Joan, 14; Linda, 12; and Becky, six.

DR. H. VICTOR MURDAUGH

Dr. Herschel Victor Murdaugh, Jr., has joined the Department of Medicine as Assistant Professor of Medicine and Director, Renal and Electrolyte Section of the Department. Dr. Murdaugh is also Assistant Chief, Medical Service, of the Veterans Administration Hospital in the Medical Center.

Dr. Murdaugh received his M. D. degree from Duke University School of Medicine, Durham, North Carolina, in June 1950. He was an Intern in Medicine at Grady Memorial Hospital, Atlanta, Georgia.



Dr. Murdaugh

Following his separation from the Air Force, Dr. Murdaugh was an Assistant Resident in Medicine at Duke from 1953 through 1954 and following this spent a year as a United States Public Health Research Fellow in the Department of Medicine at Duke. He then was a Senior Assistant Resident in Medicine at Duke and afterward was Chief Resident in Medicine and Instructor in Medicine in the Department of Medicine at Duke University School of Medicine. Since July 1957, he has been an Associate in Medicine at Duke.

Dr. Murdaugh is a member of the American Federation for Clinical Research, the Medical and Metaphysical Society, as well as Sigma Xi. He is a Diplomate of the American Board of Internal Medicine.

Dr. Murdaugh has done considerable work in the field of renal physiology and diseases and his research work has led him to the study of renal function in not only the dog and sheep but also the seal. He has published many papers on renal phy-

siology and pathology and he will continue this line of endeavor in the Medical Center.

DR. CHARLES "PETE" CRUMP

Dr. Charles Harry Crump joined the Department of Medicine on a full-time basis July 1.

Dr. Crump received his A. B. degree from the University of Alabama in 1949 and graduated from the Medical College of Alabama in 1954. In 1952 and 1953 he was a Research Fellow in Medicine, working under the direction of Dr. Tinsley R. Harrison.



Dr. Crump

After interning here at University Hospital, Dr. Crump took his residencies at the Peter Bent Brigham Hospital in Boston. While there he was a Research Fellow in Medicine and Assistant in Medicine, working with Dr. C. Sidney Burwell. Dr. Crump returns to the Medical College as an Instructor in Medicine. His main interest is in the field of pulmonary physiology and pulmonary diseases and his main assignment is in that section of the Department of Medicine.

MR. JOHN O. TUCKER

John O. Tucker has been appointed Night Administrator at University Hospital and Hillman Clinic. He will have administrative responsibility for operation of the hospital for the midnight to morning hours, thus releasing the Nursing Administrative personnel to give more professional supervision on the patient units.

Mr. Tucker received his M. S. degree in Hospital Administration from Northwestern University and also holds an A. B. degree from Howard College. He is a member of the American Hospital Association, the Alabama Hospital Association and the Birmingham Hospital Council.

DR. LYONS ELECTED AMA VICE CHAIRMAN

Dr. Champ Lyons, Head of the Department of Surgery of the Medical Center, was recently elected Vice-Chairman of the Section on Surgery of the American Medical Association.

The election was held during the Association's annual meeting in San Francisco. Dr. Lyons will preside during some of the sessions at the next annual meeting, which will be held in Atlantic City in 1959, and will also function as a member of the Executive Committee for the coming year.

Dr. Lyons' appointment is particularly significant since next year will be the 100th anniversary of the Section on Surgery.

DONALD BALDWIN RECEIVES HIGHEST SOPHOMORE SCORE

Donald Baldwin, dental student who just completed his sophomore year at the University of Alabama Dental School, has scored the highest grade ever obtained by a sophomore student taking the Cancer Research examinations since the inception of the testing program.

These tests are given yearly to all grades of all medical and dental colleges wishing to participate. In the school year just ended, some thirty schools took part in the testing, which is sponsored by the Cancer Research Institute of the University of California Medical Center.

In a letter received by Dr. Leonard Robinson, Professor of Oral Pathology at the Dental College, it was stated that "Mr. Baldwin obtained the highest Cancer Test score nationally out of some 2500 sophomores who took the examination this year."

DR. LINN PRESIDES OVER PROCTOLOGIC MEETING

Dr. Julius E. Linn, member of the staff of the Medical Center, has just returned from Los An-

geles, California, where he presided over the American Proctologic Society's annual meeting.

In his presidential address to the organization made up of physicians who specialize in diseases of the colon, Dr. Linn said "Significant steps to advance the medical specialty of proctology have been taken recently." He reported the establishment of a proctology journal to further advance education for proctologists. He said that a new research foundation has been set up, one of the functions of which will be to furnish aid to medical students who wish to specialize in proctology. "A \$10,000 scholarship loan fund has been established to launch this endeavor," he stated, "and a valuable library of photographic slides has been created to aid with the program of seminars and advanced study of doctors."

In the course of his presidential address, Dr. Linn commented about human rights but stated that little has been said about the responsibilities and obligations of citizenship which go with such rights. As one means of meeting his obligation to mankind, Dr. Linn called upon the physician to "render to society such services as are within his capacity."



ASSOCIATION FORUM

TEN YEARS OF AMERICAN HEART ASSOCIATION RESEARCH SUPPORT 1948-1958

(Reprinted from Heart Research Newsletter, Vol. 2, No. 4, 1957)

HOW AHA CUT PATTERN FOR RESEARCH SUPPORT

In October 1948, the American Heart Association, newly reorganized as a voluntary public health agency, authorized its first research award. This was a \$25,000 grant for the Hungarian Nobel Prize-winner, Dr. Albert Szent-Gyorgyi, and his colleagues, to keep this research unit together. ("That award really saved my group," Dr. Szent-Gyorgyi recalled recently.)

Thus opened a pioneer organized attack upon heart diseases, the leading cause of death in the United States. For the first time, a national effort, combining physicians, research workers and the public, was launched to find the causes of heart and blood vessel maladies and discover how they

could be prevented as well as how their treatment could be improved.

Back of the first research award lay years of planning. Before a dollar of public money was sought the Heart Association, originally a professional organization, hammered out these fundamental decisions that became models in the field of medical research awards:

Five Principles

The weight of the new organization's attack must go to research, the only hope for success in combatting heart disease.

Research funds should go to able investigators, judiciously chosen for performance and promise, and then left to work in any area which appeared productive.

Established research workers should be given a source of long-term support for continuous work. Three years later this policy flowered into a

precedent-making award—the first Career Investigator was provided with a life-time guarantee of funds to pursue his work. (Two others came later and, only recently, another voluntary health organization established the same type of award.)

Young men were to be encouraged to enter the field to assure continuing cardiovascular research.

Basic science—the search for fundamental causes of disease—would be given full emphasis in addition to the clinical problems of diagnosis, treatment and prevention.

Research Increases

When these lines were drawn the public was asked for support. It replied generously and each year thereafter increased its donations. In proportion to these increases the American Heart Association expanded its support for research.

American Heart Association awards, carefully selected by a jury of eminent scientists, soon became honored distinctions. Outstanding research workers were attracted and, with Heart Association support, pressed their studies.

Expanding the Attack

Building on the pattern of existing research support from business and private philanthropy, the Heart Association thus took the lead in clearly defining objectives and mapping a nation-wide effort. It recognized the need for government participation in the over-all research effort and so assisted in the development of the National Heart Institute of the U. S. Public Health Service. The government program has always been coordinated with the Association's program, thus avoiding duplication of effort and expenditures.

Currently, as the American Heart Association is disbursing its awards for the fiscal year 1957-8, it is entering its tenth year as a voluntary public health agency. Among its 369 awards for this tenth year there is again a grant for Dr. Szent-Gyorgyi to develop further his new concept of muscular contraction, of importance in understanding the heart muscle.

GAINS IN TEN YEARS—AND UNKNOWNNS AHEAD

What are the ten-year gains resulting from this intensified research drive from all sources of support?

Outstanding have been the dramatic achievements of surgeons in repairing previously hopeless heart defects. New drugs have appeared to help those with high blood pressure. Improved drugs and diet therapy have helped heart failure patients. Rheumatic fever seemed to be yielding to prevention. Anti-clotting drugs have been shown to reduce the death rate after the first heart attack and long-term anticoagulant therapy has been extensively studied.

The application of electronics and the use of radioactive tracers have given investigators important new tools and provided physicians with improved methods for diagnosis. The catheter, pushed up through the veins into the heart chambers, has become widely used as a method for diagnosing heart and circulatory malfunctions. The value of regular exercise, the need to keep down weight, and sensible diet precautions have been affirmed.

The Big Questions

Yet the unknowns remain.

What causes hardening of the arteries? How can this disease be diagnosed at an early stage? How can it be prevented? Can "strokes" and "heart attacks" be warded off? Why are only certain individuals susceptible to rheumatic heart disease?

These and a multitude of other unanswered questions make up the problems still to be solved. The American Heart Association, backed by the American public, entered its tenth year with its research support effort reaching the highest peak in its history.

RESEARCH MONEY GIVEN LOCALLY, NATIONALLY

In the year 1957-8 the combined research expenditures of the American Heart Association and its affiliates were expected to total almost \$7,000,000. This will bring to almost \$29,000,000 the funds channelled to research since the first award in 1948.

These expenditures represented the considered judgment of leaders in the field sitting as research committees. Their responsibility was to award carefully and intelligently the research dollars entrusted to them by the public.

The awards were made in two ways.

One method was through the 56 state, regional or territorial affiliated Heart Associations (and their 286 chapters).

The other was through the National Office.

The Affiliates

The affiliates supported research locally with an average of 33 per cent of their incomes. From 1948, when affiliate research totalled less than \$500,000, it has multiplied eight times to an expected 1957-8 expenditure of some \$4,500,000. This money was usually apportioned by research committees similar to the research committee of the National Office. About 16 chairs of cardiovascular research had been established and hundreds of investigators had received grants and fellowships.

In addition to these research awards, the affiliates sent 25 per cent of their Heart Fund to the National Office. More than half of this sum was devoted to research selected on a national basis by

the American Heart Association Research Committee.

National Office

In 1957-8 the American Heart Association National Office made 369 awards totalling \$2,305,000.

CATEGORIES OF 1957-58 NATIONAL OFFICE AWARDS	
3 Career Investigators	—Individuals of outstanding scientific achievement and ability selected for life-time support.
75 Established Investigators	—Highly qualified scientists who have demonstrated ability and originality in at least two years of research.
68 Research Fellows	—Young scientists who need financial assistance in preparing for research careers under experienced guidance.
223 Grants-in-Aid	—Sums given for specific research projects of one to five years (subject to annual review).

TYPES OF RESEARCH GIVEN AHA SUPPORT				
HOW 1957-8 NATIONAL OFFICE AWARDS ARE DIVIDED				
	Basic	Clinical	Epidemiological	Total
Atherosclerosis	35	17	3	55
Circulation	57	46		103
Drugs	1			1
Electrolytes	14	8		22
Endocrinology	5	1		6
Hypertension	10	10		20
Kidney	15	14		29
Liver		2		2
Lung	4	15		19
Muscle	55			55
Rheumatic Fever	29	3	3	35
Surgery	8	14		22
	233	130	6	369

Basic

Basic research—the gathering of necessary fundamental knowledge that may have eventual practical application—is the basis for medical weapons of the future. It accounts for more than 60 per cent of the 1957-8 awards. Of these, the largest number (57) is concerned with the circulation of the blood. Just one example is the Established Investigator who is using radioactive isotopes to explore certain chemical steps which provide energy for heart muscle contraction which, in turn, pumps the blood.

Clinical

Investigation based on the observation and treatment of patients is clinical research. About a third of the current National Office awards fall in this category.

Seventeen of these awards, for instance, are specifically concerned with atherosclerosis (hardening of the arteries). Typical is one investigator who is studying the effects of drugs which lengthen the clotting time of the blood. Another is concerned with the aging processes as reflected in the cornea of the eye (the window membrane) and how this is related to fat deposits in the blood vessels. Still another is investigating methods to dissolve clots once they have formed.

Epidemiological

Epidemiologic research is the study of factors that influence the occurrence and distribution of disease in a population.

Six awards are for studies on hardening of the arteries and rheumatic fever. One, on hardening of the arteries, uses railroad retirement records as part of an attempt to find out how active and sedentary railroad employees are afflicted by heart disease. Epidemiologic studies concerning rheumatic fever in children will weigh the effectiveness of prevention methods.

Each year of American Heart Association research support has been larger than the past one. More money has been expended on research. More investigators have been assisted. New fields of study have been explored. The tenth year is a time to take stock—and a time to consider plans and the way ahead.

RESEARCH SUPPORT: LINES FOR FUTURE

In the future a major concern will be youth.

More promising young people must be attracted to careers not only in all sciences but in cardiovascular research.

Many affiliates are already offering fellowships and grants to college undergraduates and medical students who thus obtain first-hand experience in scientific investigation.

The National Office has long foreseen the need for expanding this effort and has been actively exploring means to interest young people in heart research. The post of “Director of Student Education” has been established and, as a first step, the Association is joining a concerted effort to reach, through national media, young people at the threshold of their careers.

Rising Cost of Research

Another trend that has already been faced is the rising cost of research.

Even if there were no increase in the number of

awards, more dollars would be needed to meet the research worker's rising cost of living. If more investigators are supported, more funds will be needed.

As a beginning, the National Office will increase the annual stipends of Research Fellows beginning July 1, 1958. The stipends of other investigators are expected to rise as future awards are made.

New Category of Award

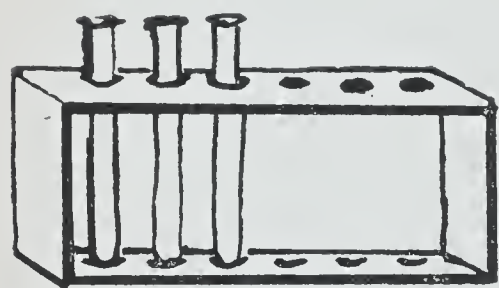
The categories of awards are frequently considered for improvement. In 1958-9 a new kind of fellowship will be awarded by the National Office. It is called the *Advanced Research Fellowship*. Those who receive this award will form a group between the Research Fellow and the Established Investigator. They will be men who have received their doctorates and have some research training and experience. Advanced Research Fellows are expected to benefit from continued training under experienced supervision. This will bring to five, the categories of awards now offered by the Amer-

ican Heart Association in its attempt to assist as many able research workers as possible.

The Purpose

But more than encouraging young research workers, paying investigators adequate stipends and establishing new categories, the future of the American Heart Association research program lies in providing help for people victimized by heart disease.

"Our plans," said Dr. Robert W. Wilkins, President of the American Heart Association, "include a massive assault on the problem of hardening of the arteries . . . I predict that within the next decade great advances will be made toward this goal, perhaps through new and effective methods of treatment and prevention. In high blood pressure we can now devote more attention to the ultimate concern of all medicine, namely prevention. We must continue to grow and expand to the extent our program requires."



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

IMPROVING NURSING HOME CARE IN ALABAMA

The State Board of Health was assigned certain responsibilities with respect to Alabama's nursing homes in 1949. In that year the Legislature passed the Hospital Licensure Act (Act No. 530) which required the State Board of Health to regulate, through licensure, hospitals, sanatoria, rest homes, nursing homes and related institutions. The Act, which became effective January 1, 1950, empowered the State Board of Health to make and enforce reasonable rules and regulations governing the operation and conduct of the institutions defined therein.

The responsibilities delegated to the State Board of Health by this legislation are discharged through the Hospital Planning Division of the State Health Department. As the Hospital Planning Division in 1950 undertook the inspection program necessary to license these facilities, it soon became apparent that Alabama had a twofold problem as far as nursing homes were concerned: There were far too few such facilities in the state, and the care offered by those in existence was, in most cases, woefully inadequate. The Hospital

Planning Division then began its continuing program to improve nursing homes from the standpoint of both quality and quantity.

It is regrettable that very little real progress has been made toward increasing the number of nursing homes in the state. According to the *Alabama Master Hospital Plan* the state needs 6,220 nursing home beds. This figure is based on the U. S. Public Health Service's recommended ratio of two beds for each 1,000 population. The figure may change as the population fluctuates and as experience indicates that we actually need more or fewer beds. The *Master Hospital Plan* also shows that we have only 828 nursing home beds. Of this number, only 196 are considered suitable. Another 205 are described as "replaceable." That is, they are performing a community service, but should be replaced because the buildings either do not meet certain construction standards or are in unsuitable locations. The remaining 427 beds are unsuitable because they do not meet standards relative to fire safety, or construction is of a type to render the building unsuitable for patient care, or beds are placed in space not suitable for patient care and needed for other services. It is felt that conditions at these homes are such that they cannot be improved to a suitable condition, and they

operate under provisional licenses. The 196 suitable beds amount to only about three per cent of the number needed.

Efforts to increase the number of nursing homes have taken the form of attempting to create public awareness of and interest in the need and of encouraging hospitals and other organizations to construct and operate nursing homes as integral parts of the service they offer. This does not mean that privately owned nursing homes have no place in the picture. They can and do offer a real service. Generally speaking, however, hospitals and religious organizations, for example, are in a better financial position and have more experience in operating this sort of facility than do individuals acting in a private capacity.

It is hoped that the fact that Hill-Burton funds may now, under certain conditions, be utilized in the construction of nursing homes will stimulate the further building of these facilities. One 30-bed and one 26-bed nursing home constructed with the aid of Hill-Burton funds are already in operation. Two homes with a total of 70 beds have been approved for construction, and the Hospital Planning Division has applications on file for eight homes with a total of 261 beds. Additional applications will be welcomed.

On the other hand, the Hospital Planning Division's efforts to improve the quality of care offered by nursing homes have met with appreciable success. Although the first standards which were adopted were lower than believed to be desirable, it was very difficult for most nursing homes to comply with them. Some of the prevailing conditions found in the nursing homes were described as "housing in old inadequate frame residences; lack of qualified personnel; lack of adequate medical care; and lack of adequate financial backing."

Improvement has been brought about by a policy of setting standards which were not completely impossible for the nursing homes to meet. These standards are developed by the Hospital Licensing Advisory Board which is constituted as follows: four representatives of hospitals, three physicians, one registered nurse, one representative of the State Department of Pensions and Security, and one registered pharmacist. The standards are then submitted to the State Board of Health for adoption. Then, through inspection, consultation, a program of provisional licensing and any other means at hand, the Hospital Planning Division has attempted to help nursing homes meet these standards. As more and more nursing homes have met the standards, they have been raised, although never to a point impossible of attainment.

The current rules, regulations and standards governing nursing homes in Alabama were adopted in October 1957 and became effective one month later. These regulations are the most comprehen-

sive and the strictest yet adopted. They cover every phase of nursing home operation: administration, personnel, storage, preparation and handling of drugs and medicines; medical, nursing and personal services; recreational, religious and social work activities; food service, sanitation and housekeeping, and physical plant.

Operating under these new regulations, the Hospital Planning Division will continue its policy of helping nursing homes raise the quality of care they offer. Their application is not and will not be in any way punitive. As the introduction to the regulations states, "The sole purpose of these regulations is to improve the quality of nursing home care rendered in Alabama nursing homes and to provide a safe place of residence with a maximum of home-like atmosphere to nursing home patients. In drafting these regulations, it was the intent of the State Board of Health to provide a reasonable set of regulations that would accomplish these purposes and yet be within the ability of the average nursing home owner to accomplish. Many of these regulations have the dual purpose of protecting both the nursing home patient and the nursing home operator, thereby making it possible to achieve a better nursing home for both." Nursing home operators were given 24 months to comply with the new regulations. Adequate provisions for appeal of decisions of the Hospital Planning Division are incorporated, and advice and assistance are offered to all who desire them.

Statements to the effect that nursing home care is inadequate are not intended as criticism of nursing home operators. Theirs is a relatively new field of operation, and the guidance they are now offered has been available for only eight years. The manner in which most of the operators have accepted the regulatory activities of the State Board of Health has been gratifying. They have construed these efforts in the spirit in which they were intended, and, in most instances, have welcomed the help offered them. They appear, by and large, to be genuinely eager to improve their services and are to be commended for their efforts and their cooperative spirit. Undoubtedly they will accept a new program of the State Board of Health—the services available through the Chronic Disease Program—in the same manner. These services will be in the fields of nursing, nutrition and sanitation.

Continued cooperation between the Division of Hospital Planning and nursing home operators and full utilization of the services offered in the new program should mean that present and future facilities will offer truly adequate nursing home care for the first time in Alabama's history. Efforts will be continued to increase the amount of such care.

DEPARTMENT OF HEALTH

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

July 1958

Examinations for diphtheria bacilli and Vincent's	38
Agglutination tests	651
Typhoid cultures (blood, feces and urine)	669
Brucella cultures	5
Examinations for malaria	66
Examinations for intestinal parasites	2,555
Darkfield examinations	6
Serologic tests for syphilis (blood and spinal fluid)	23,641
Examinations for gonococci	1,614
Examinations for tubercle bacilli	3,566
Examinations for Negri bodies (smears and animal inoculations)	244
Water examinations	3,011
Milk and dairy products examination	4,530
Miscellaneous examinations	586
Total	41,182

Dothan Branch Laboratory's report was not received in time to be included.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS
1958

	June	July	E.E.* July
Typhoid and paratyphoid	0	4	5
Undulant fever	0	0	1
Meningitis	2	11	6
Scarlet fever	503	37	19
Whooping cough	55	11	62
Diphtheria	2	1	8
Tetanus	3	4	4
Tuberculosis	161	189	195
Tularemia	0	0	0
Amebic dysentery	0	1	1
Malaria	0	0	4
Influenza	45	3	35
Smallpox	0	0	0
Measles	936	140	172
Poliomyelitis	0	2	62
Encephalitis	0	2	0
Chickenpox	25	4	16
Typhus fever	0	3	2
Mumps	28	8	76
Cancer	529	510	405
Pellagra	0	0	1
Pneumonia	146	66	96
Syphilis	171	95	188
Chancroid	5	2	5
Gonorrhea	406	314	367
Rabies—Human cases	0	0	0
Positive animal heads	20	20	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR APRIL 1958, AND COMPARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During April 1958			Rates* (Annual Basis)		
	Total	White	Non- White	1958	1957	1956
Live births	5858	3784	2074	22.3	23.9	24.7
Deaths	2425	1473	952	9.2	8.9	8.5
Fetal deaths	124	58	66	20.7	22.5	21.9
Infant deaths—						
under one month	140	60	80	23.9	22.7	19.9
under one year	201	77	124	34.3	31.1	30.8
Cause of Death						
Tuberculosis, 001-019	30	16	14	11.4	11.9	12.4
Syphilis, 020-029	14	4	10	5.3	1.5	
Dysentery, 045-048	1	1		0.4		
Diphtheria, 055					0.4	
Whooping cough, 056					0.4	0.4
Meningococcal infections, 057	1		1	0.4		0.4
Poliomyelitis, 080, 081	1	1		0.4	0.4	0.4
Measles, 085	6	3	3	2.3	1.5	
Malignant neoplasms, 140-205	290	219	71	110.5	111.3	115.4
Diabetes mellitus, 260	45	24	21	17.2	11.2	10.8
Pellagra, 281					0.4	0.8
Vascular lesions of central nervous system, 330-334	311	179	132	118.2	122.8	110.4
Rheumatic fever, 400-402					0.8	1.2
Diseases of the heart, 410-443	841	545	296	320.5	302.3	270.7
Hypertension with heart disease, 440-443	171	82	89	65.2	59.7	56.4
Diseases of the arteries, 450-456	58	40	18	22.1	20.0	16.2
Influenza, 480-483	27	15	12	10.3	6.2	6.6
Pneumonia, all forms, 490-493	87	42	45	33.2	22.7	27.8
Bronchitis, 500-502	6	2	4	2.3	1.2	4.2
Appendicitis, 550-553	2		2	0.8	2.3	1.9
Intestinal obstruction and hernia, 560, 561, 570	10	5	5	3.8	3.5	2.3
Gastro-enteritis and colitis, under 2, 571.0, 764	3	2	1	1.1	2.3	3.1
Cirrhosis of liver, 581	11	5	6	4.2	3.1	5.0
Diseases of pregnancy and childbirth, 640-689	9		9	15.0	6.3	9.2
Congenital malformations, 750-759	28	18	10	4.8	5.0	3.8
Accidents, total, 800-962	158	107	51	60.2	63.9	66.4
Motor vehicle accidents, 810-835, 960	66	55	11	25.2	31.6	32.4
All other defined causes	381	204	177	145.2	159.8	149.4
Ill-defined and unknown causes, 780-793, 795	105	41	64	40.0	27.3	35.5

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR MAY 1958 AND COMPARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During May 1958			Rates* (Annual Basis)		
	Total	White	Non- White	1958	1957	1956
Live births	5911	3670	2241	21.8	22.8	22.5
Deaths	2248	1355	893	8.3	8.4	8.6
Fetal deaths	145	62	83	23.9	20.3	20.8
Infant deaths—						
under one month	159	75	84	26.9	24.0	22.8
under one year	225	96	129	38.1	33.9	33.3
Cause of Death						
Tuberculosis, 001-019	31	16	15	11.4	9.7	13.8
Syphilis, 020-029	8	2	6	3.0	1.9	2.6
Dysentery, 045-048						0.7
Diphtheria, 055						
Whooping cough, 056						0.4
Meningococcal infections, 057					1.1	0.4
Poliomyelitis, 080, 081	1	1		0.4	0.4	
Measles, 085	4	2	2	1.5	1.5	1.5
Malignant neoplasms, 140-205	269	178	91	99.2	103.6	117.0
Diabetes mellitus, 260	32	18	14	11.8	10.8	8.6
Pellagra, 281					0.7	
Vascular lesions of central nervous system, 330-334	342	206	136	126.1	115.5	103.9
Rheumatic fever, 400-402					0.4	1.1
Diseases of the heart, 410-443	739	461	278	272.6	279.8	304.9
Hypertension with heart disease, 440-443	140	58	82	51.6	56.6	69.3
Diseases of the arteries, 450-456	40	26	14	14.8	20.5	17.9
Influenza, 480-483	14	6	8	5.2	4.8	4.9
Pneumonia, all forms, 490-493	53	21	32	19.5	22.7	29.9
Bronchitis, 500-502	2	2		0.7	1.5	0.7
Appendicitis, 550-553	4	1	3	1.5	0.7	1.9
Intestinal obstruction and hernia, 560, 561, 570	9	6	3	3.3	4.1	2.2
Gastro-enteritis and colitis, under 2, 571.0, 764	5	1	4	1.8	3.0	1.1
Cirrhosis of liver, 581	16	11	5	5.9	4.5	4.1
Diseases of pregnancy and childbirth, 640-689	2	1	1	3.3	11.2	8.1
Congenital malformations, 750-759	27	20	7	4.6	6.4	5.0
Immaturity at birth, 774-776	51	22	29	8.6	8.6	7.0
Accidents, total, 800-962	155	103	52	57.2	61.5	58.3
Motor vehicle accidents, 810-835, 960	78	52	26	28.8	26.5	26.2
All other defined causes	347	212	135	128.0	124.8	117.0
Ill-defined and unknown causes, 780-793, 795	97	39	58	35.8	27.2	35.1

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.



BOOK REVIEWS

Dietary Prevention and Treatment of Heart Disease. By John W. Gofman, Ph. D., M. D., Donner Laboratory, University of California, Berkeley; Alex V. Nichols, Ph. D., Donner Laboratory, University of California, Berkeley; and E. Virginia Dobbin, E. V. Cowell Memorial Hospital, University of California, Berkeley. Cloth. Price, \$3.95. Pp. 256. G. P. Putnam's Sons, 210 Madison Avenue, New York, 1958.

This is an excellent book, written for the intelligent patient but with enough latitude for the physician or any average patient. There are practical recommendations for the dietary management of the average American even without medical supervision, the patient who has been found to have an abnormal lipoprotein pattern without clinical evidence of vascular disease, or the patient who has already developed his vascular problems.

This book naturally follows the theories of vascular disease which have been advanced by Dr. Gofman. It has very good discussions of the nature of heart disease; effects of varying fat intake with regard to degree of saturation and amount; effects of high carbohydrate intake on a specific group of patients, and role of being overweight. The section on evaluating your own diet certainly would find use only for very enthusiastic and intelligent patients. The section on altering your diet and recommended diets can be used easily by the majority of patients. There are a large number of recipes of a wide variety which appear to be very practical.

This book is highly recommended for reading by all physicians and by all people interested enough in increasing their longevity to alter their diet to some degree.

William B. Crum, M. D.

Diabetes as a Way of Life. By T. S. Danowski, M. D., Renziehausen Professor of Research Medicine, University of Pittsburgh School of Medicine; Senior Staff Physician at Presbyterian-Woman's, Children's, Elizabeth Steel Magee, and Shadyside Hospitals of Pittsburgh; Consultant in Metabolism, Oakland Veteran's Administration Hospital, Pittsburgh. Cloth. Price, \$3.50. Pp. 177. Coward-McCann, Inc., Publisher, 210 Madison Avenue, N. Y., 1958.

The author of this book, written primarily for the diabetic, covers the problems facing sufferers of an incurable but correctable disorder. Dr. Danowski recognizes that "During more than 99% of his entire life span the diabetic and his family treat this disorder without a doctor, nurse, or dietitian standing by." Education of the diabetic to his "way of life" becomes of utmost importance; and it is the responsibility of each physician to instruct his diabetic patients. Though there may be some difference in approach on the part of the individual physician, the outline found in this book serves as an excellent guide for covering all aspects of patient education.

Emotional problems, as well as signs and symptoms, are discussed. Diet information follows for the most part the ADA plan. Various types of insulin are discussed. At times the author is a little more technical than the average diabetic deserves but this book is useful to the physician for that very reason. Advice is given about surgery, infections, pregnancy, and various complicating conditions. There is a chapter on juvenile diabetes. Finally, the question and answer section and the appendix round out an educational program worthy of attention by diabetics and physicians.

Wm. L. Smith, M. D.

Soldier in White, the Life of General George Miller Sternberg. By John M. Gibson, Librarian of the North Carolina State Board of Health, Raleigh. Cloth. Price, \$6.75. Pp. 277. Duke University Press, Durham, N. C., 1958.

For many Americans, biographies offer the literature's most interesting reading; and here is one so appealingly written that the reader finds it difficult to lay it down before it has been finished. The author has a fine command of the language and he uses it in a factual way to shed glory on one of the nation's medical pioneers in a specialized field, namely, bacteriology. However, Dr. Sternberg was a many-faceted physician and Mr. Gibson neglected none of them in writing the story of his life.

The book is unhesitatingly recommended for an evening's complete enjoyment.

Douglas L. Cannon, M. D.

You Can Increase Your Heart-Power. By Peter J. Steincrohn, M. D., Hartford, Conn. Cloth. Price, \$4.95. Pp. 381. Doubleday and Company, Inc., 575 Madison Avenue, New York 22, 1958.

This book is to be recommended to physicians for use with their cardiac or potentially cardiac patients. It answers many questions with which the average patient does not wish to bother his busy physician.

This book consists of a brief introduction to a very inclusive group of subjects which should arise in the mind of any good cardiac patient. Heart diseases generally, cholesterol effects, effects of smoking, drinking, state of nutrition, and weather conditions, judging your own doctor, and high blood pressure are examples of topics discussed. The author is at his poorest when he takes issue with Dr. Paul White on exercise. His philosophy to be recommended to the psychoneurotic or cardiac is good. The sections on "Fatigue Drains Off Heart Power" and "Tips on Relaxation" are to be highly recommended.

Letters addressed to this syndicated writer, with replies from him, make up the major portion of the book. These become tiring to the medically trained reader, but would serve well the reading patient, who needs to see that others have similar problems and questions.

Each of us will take issue with some sections, as there are conflicting opinions to many facets of cardiology.

Of necessity, recent advances in cardiology are not included in this book. This book should thus be read by any physician prior to recommending it for his own patients.

This book is written for the patient. It should be easy, interesting, and informative for him. It will serve the cardiac well until a more complete text, written in the style of Dr. Joslin's *Handbook for Diabetic Patients*, becomes available.

William B. Crum, M. D.

Surgery in World War II. Ophthalmology and Otolaryngology. Col. John Boyd Coates, Jr., M. C., Editor-in-Chief, Office of the Surgeon General, Department of the Army. Buckram. Price, \$5.00. Pp. 605. U. S. Government Printing Office, Washington 25, D. C., 1957.

This book is divided into two parts, Ophthalmology and Otolaryngology. Only the first part is being reviewed at this time.

The section on Ophthalmology in this history of the Army Medical Department in World War II is based on the work and experience of the chiefs of the Ophthalmological Branch in the Surgeon General's Office, the overseas consultants, and medical officers concerned with problems related to the eye. It is a record of administrative phases and clinical aspects of ophthalmology as reflected in the policies and practices concerned with both the specialty and its associated activities, such as optical and artificial eye progress and, most significantly, the program for the rehabilitation of blinded casualties. Some of the clinical procedures described may seem, a decade later, outmoded and archaic since newer methods have been developed in the progress of ophthalmology, but administrative experiences may serve as a basis for the conservation of time and energy in the event of another conflict.

The ophthalmological section of this excellently bound volume consists of 19 chapters written by various members of the armed forces, all specialists in ophthalmology, many now actively engaged in the civilian practice of ophthalmology.

Initial chapters biograph the origin of the ophthalmic section of the Surgeon General of the Army and the zone of interior hospitals and equipment. This is followed by a chapter on management of special conditions in the zone of interior which is a review of usual ophthalmic treatment procedures. The following chapter reviews the Mediterranean Theater of Operation which, though old stuff, is of interest to ophthalmologists, especially if these demands are ever again made of this specialty. The optical progress of supplying spectacles, glasses for gas masks and prosthesis is reviewed. These chapters are summary reports written to the Office of the Surgeon General by Area Medical Ophthalmic Commanders. Mention is made of the incidence of sympathetic ophthalmia, estimated at 2%. Types and management of intraocular foreign bodies are well described.

Administrative aspects of ophthalmology in the European Theater of Operation covers Chapter V. Here interesting accounts are made of the use of St. Dunstan's for care and training of servicemen blinded in that theater. Mobile optical units are described in detail.

Clinical policies in ophthalmology, European Theater of Operation, and in the Southwest Pacific and Pacific Ocean areas are again summaries of case management of combat and noncombat eye diseases. Interesting accounts are described of ocular complications of scrub typhus and corneal edema resulting from Atabrine therapy.

Chapter IX deals with the rehabilitation of blinded casualties and development of institutions for their care. The following nine chapters deal mostly with practical ophthalmology by a variety of good authors, with special reference to these conditions as they appeared during the war. Management of intraocular foreign bodies in the zone of interior is well presented. Uveitis in the zone of interior adds nothing to our knowledge of this condition but does reveal it to be a problem during World War II. Likewise, retinal detachment and the management of cataracts in military personnel were routine for that period, with trauma precipitating the condition so often. Night blindness was a problem during the war; it is fully described, revealing its many causes.

The chapter which covers visual disturbances associated with head injuries is very enlightening in verifying visual field defects with localized head injuries. There was insurpassable material for this study. And it is true that during war time many contributions to this subject are made. Again, sparing of the macula is shown to be the rule in vascular lesions but is less frequent in traumatic lesions. Bilateral hemianopsia is presented and well discussed. Plastic surgery of the lids and orbit is of interest, especially with the present day high incidence of auto accident and such injuries. The final chapters concern chemotherapy and antibiotic therapy in the zone of interior which is well reviewed by Phillips Thyngenson.

This is not a reference manual of eye diseases but rather a summary of World War II experiences as related to the care of eye injuries and diseases during that conflict.

Karl Benkwith, M. D.

Hormones in Blood. Ciba Foundation Colloquia on Endocrinology, Vol. XI. Edited by G. E. W. Wolstenholme, O. B. E., M. A., M. B., B. Ch., and Elaine C. P. Millar, A. H.-W. C., A. R. I. C. Cloth. Price, \$9.00. Pp. 416, with 74 illustrations. Little, Brown and Co., Boston, 1957.

This is another of the Ciba Foundation's fine symposia. There are excellent review articles by leading authorities in this field on hormones that can be measured in the blood. There is a discussion of the biosynthesis, physiology, physiochemical states in blood, and methods of measuring many of these hormones. It is recommended for individuals engaged in research and clinicians particularly interested in the field.

Walker B. Sorrell, M. D.

The Story of Peptic Ulcer. By Richard D. Tonkin, M. D., F. R. C. P., Westminster Hospital, London. Illustrated by Raymond Keith Hellier, F. R. S. A. Paper. Price, \$2.25. Pp. 71. W. B. Saunders Company, West Washington Square, Philadelphia 5, 1958.

For many years Dr. Tonkin had been completely dissatisfied with his own advice to patients having peptic ulcer and with the available printed material for these same people. The time factor often precluded his giving what he considered adequate oral explanation to his dyspeptic patients and this, too, added to the patient's lack of understanding of the situation and to Dr. Tonkin's dissatisfaction with results. Gradually, there evolved in his mind this simple yet graphic method of presenting the facts about ulcer to patients and, at the same time, attempting to dispel from their minds many fears and old wives' tales. Having formulated his brief text then, next came a happy association with Ray Hel-

lier who has so aptly and adequately illustrated the text with meaningful drawings.

The combined results are a most happy mixture for both doctor and patient. The medical advice contained in this book is sound and yet is so interestingly presented that it makes delightful reading for anyone. The facts presented so charmingly should make happy reading for many, many ulcer patients.

J. M. Barnes, M. D.

Love, Skill, and Mystery. By Theodore Bovet, M. D. Cloth. Price, \$3.50. Pp. 188. Doubleday and Company, Inc., 575 Madison Avenue, New York 22, New York, 1958.

This book is written by a devout, dedicated marriage counselor who has a profound insight into basic human relationships. Dr. Bovet is a physician with wide experience in marriage counseling and his books have had wide circulation throughout the continent. The present book is the second edition and the first translation of his work into the English language. It is written simply and can be understood easily by the average couple whether preparing for marriage or interested in a marriage already established.

The book falls into three sections, the first of which considers the psychologic background of the marriage relationship. It is the reviewer's opinion that there are very few marriages of any established time which could not benefit by the philosophy expressed in the opening section. The second section deals with actual technique of married life and is as beautifully written and handled as any published today. The third section deals with problems of the marriage relationship after establishment and is probably the weakest section of the book. The weakness is probably due to the basic difference in American mores and those experienced on the continent. In spite of this small difference it is surprising how close to home the author's remarks touch the average way of life of the American family.

The usefulness of this book is probably much greater to those who have an established marriage than to those who are preparing for marriage. This is due to the type of work that Dr. Bovet does in his marriage counseling and his primary interest in the problems of couples who have already entered upon the marriage pact. This book is unreservedly recommended to those who feel that something is lacking in their marriage, and to those who have problems involving an established marriage. No teacher or counselor in this field should be without this excellent guide.

E. Fred Campbell, M. D.

Healthful School Living. Edited by Charles C. Wilson, M. D., Professor of Education and Public Health, Yale University. Cloth. Price, \$5.00. Pp. 323. National Education Association and American Medical Association, Washington, D. C., and Chicago, respectively, 1958.

This volume emphasizes solutions to health problems that affect pupils as they live and learn at school. Useful information is presented on such matters as school housekeeping, the prevention of accidents, water supply and waste disposal, heating, ventilation and lighting. Materials are included on the health aspects of the school lunch, school building construction, and physical education. Suggestions are made for teachers and administrators dealing with health problems involved in the organization of the school day, in various types of classroom procedures, and in rural schools.

Because of the way in which it was prepared, it presents in an integrated manner the consensus of thinking of present-day leaders in education, medicine, public health, engineering, architecture, nutrition, safety, and related fields.

Although progress has been made in many schools, there is need for improved health practices in athletics throughout the country. Among the needs listed and briefly discussed is more adequate medical supervision. The athletic program of the school should exemplify the highest possible standards for health, sanitation, and safety.

Health education is related to periodic medical examinations. The examining physician, either the pupil's private physician or the school physician, should be aware of the educational implications of a health examination. The follow-up of problems discovered by health appraisal procedures should be an educational process, based on personal conferences involving the physician, nurse, teacher, pupil and his parents.

The Committee responsible for the book concludes by stating that the formula for developing an effective program of healthful school living includes an interested school board, a health-minded school administrator, a healthy well-adjusted staff, close working relationships between school and health officials, and the active support of a school and community health council.

This volume has special value for school personnel and medical and health personnel who have contact with the schools.

W. Morrison McCall

Strabismus Ophthalmic Symposium II. Edited by James H. Allen, M. D., Professor and Chairman of the Department of Ophthalmology, School of Medicine, The Tulane University of Louisiana; Chief of Ophthalmology, Hutchinson Clinic; Senior Visiting Surgeon and Head of the Department of Ophthalmology, Tulane Unit, Charity Hospital of New Orleans; Senior Surgeon and Director of Training Program in Ophthalmology, New Orleans Eye, Ear, Nose and Throat Hospital, New Orleans. Cloth. Price, \$16.00. Pp. 552, illustrated. The C. V. Mosby Co., St. Louis, 1958.

This volume is based on the Second Symposium on Strabismus sponsored by the New Orleans Academy of Ophthalmology. The panel was composed of the following ophthalmologists, all important authorities in the field of strabismus: Francis Adler, Harold Brown, Hermann Burian, Frank Costenbader, Walter Fink, George Guibor, Philip Knapp and Kenneth Swan.

The volume contains 22 chapters and 552 pages, with a delightful appendix by a former giant in this field, Walter B. Lancaster. The book is well constructed of good binding, firm glossy pages, and excellent clear printing, 251 photographs and drawings. This is again another, certainly up-to-date, text on strabismus rating possession in the private libraries of all ophthalmologists. What is said and written by the above group of men has been recorded elsewhere: at the Academy of Ophthalmology and Otolaryngology, Academy courses, Francis Heed Adler's own *Physiology of the Eye* (another good Mosby book), Whitnall's *Anatomy of the Eye*, the *Archives of Ophthalmology*, and the *American Journal of Ophthalmology*. However, here it is compiled, edited in an orderly manner, and readily available for reference or study.

This is an excellent compilation, bringing the strabismus subject up-to-date as to our present knowledge. To this reviewer and ophthalmologist this is a good book.

Karl Benkwith, M. D.

EFFECTIVENESS OF ANTI-FEVER DRUGS STUDIED

The anti-fever drug salicylamide (Liquiprin) offers some advantages in administration but is no more effective than acetylsalicylic acid in combating high temperatures in young children, two New York doctors said recently.

Writing in the Aug. 9 Journal of the American Medical Association, Drs. Alfred J. Vignec and Mary Gasparik, New York City, said, "salicylamide suspension proved superior to aspirin in ease of administration, better acceptability, and control of dosage."

They also observed that both drugs "controlled fever equally well and with the same number of doses."

Salicylamide's advantage of easy administration, the doctors feel, eliminates two of the basic undesirable attributes of acetylsalicylic acid in the pediatric field. These are taste, and the difficulty in preparing a stable liquid preparation for small children who cannot take or who resist medications in tablet form.

Adding flavors to acetylsalicylic acid to improve the taste inevitably raises the problem of tempting the youngsters to regard the drug as candy, with possible serious consequences through overindulgence, they said.

When tablets are broken or crushed for administration, accuracy of dosage is lost and what remains is a gritty substance, difficult to administer, they added.

The comparative study of the two drugs included 512 patients under the age of three years. Their only clinical symptom at the time of initial examination was pyrexia.

Results of the test showed that control of fever was gained in 42.3 per cent of the patients.

A comparison of the drugs indicates that salicylamide was effective in 42.9 per cent of those cases and control was obtained in 45.6 per cent of the patients receiving acetylsalicylic acid.

The doctors said that failure to reduce the temperature "occurred more frequently with the salicylamide trials than with aspirin."

They also pointed out that in the event of failure by either drug to stabilize the patient after three or four trials, other treatment was introduced.

Throughout the course of the study, the doctors said, "neither salicylamide nor aspirin produced any evidence of sensitivity or toxicity."

The data gained from the study "seem to indicate that aspirin could produce greater drops in temperature and control pyrexia of higher degree than could salicylamide," they said.

To prove this point conclusively, the doctors feel that a more extensive study is needed where a

balancing of cases could be achieved by alternating the drugs on the basis of starting temperatures.

AIR CONDITIONING IS HEALTHY

Air conditioning—custom tailored climate—means much more than mere cooling.

Properly used, air conditioning implies year-round modification of humidity, air currents, and dust content of air as well as combating cold or heat, said an article in the July issue of Today's Health, a publication of the American Medical Association.

According to the author, J. C. Furnas, Lebanon, N. J., air conditioning "rescues hay fever sufferers from airborne pollen and keeps heart patients at recommended even, moderate temperatures."

It can, he said, "be distinctly 'good for' the healthiest . . . because it takes much of the curse off the bullying heat and smothering humidity of our temper-gnawing, energy-sapping summers."

In order to derive the full benefits from air conditioners, people must learn to keep windows and doors shut, the author said.

The air conditioner is designed on the assumption that it alone will be processing your indoor climate. "It needs no amateur help," he said.

Most people agree that air conditioning is helpful, but ideas of temperature comfort can also vary among individuals. "Humidity itself rules out any possibility of settling on an 'ideal temperature' for human beings," the author said.

A housewife who feels all right at 75 degrees with 50 per cent humidity will swelter if it goes to 80 per cent. Drop the humidity to 20 per cent and she will be chilled.

This is a sound reason for keeping the doors and windows shut. The author said "letting in untreated outside air destroys the humidity-temperature balance on which comfort depends."

Considerable debate still exists over the proper setting of the thermostat, the author said. In warmer parts of the country air-conditioned families often go for the fixed-level theory, ignoring outdoor conditions.

The author recommends, however, a 15 degree spread between the inside and outside temperature. "Thanks to the humidity angle," he said, "this 15 degree spread gets practically all the potential comfort out of home air conditioning."

With an efficient air conditioner keeping interior humidity at the proper 40-50 per cent level, even 80 degree temperature indoors to match 95 degrees outdoors will not be at all oppressive.

"It's not the heat; it's the humidity' may be trite," he said, "but it's the backbone of sound air conditioning."

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

October 1958

No. 4

SURGERY OF THE PROSTATE EMPHASIZING ONE-STEP SUPRAPUBIC PROSTATECTOMY

J. ULLMAN REAVES, M. D.
Mobile, Alabama

About the middle of the sixteenth century Nicolo Ulassa stated that the cause of obstruction at the neck of the bladder to the urinary outflow in the aging male was due to enlargement of the prostate gland. Following acceptance of this fact very little progress was made in combatting this pathologic entity until the middle of the eighteenth century, when surgical procedures were being developed for the removal of stones from the bladder. A prominent part in the development of the management of this condition in the presurgical years was played by such men as Sir Henry Thompson, Gouley, Guthrie, Mercier and Sir William Blizzard.

Surgical procedures for the removal of the prostate gland followed in the wake of perineal lithotomy for the removal of bladder stone; and this possibly led to the perineal route for surgically removing the gland, preceding the suprapubic route. Deaver stated that the perineal route was first employed by Billroth in 1867 for the removal of malignant disease of the prostate. Little progress was made in surgery of the gland until 1891, when Goodfellow performed perineal prostatectomy, and removed both lateral lobes, with removal of the median lobe. In 1903 Young described his perineal operation for removal of the prostate gland which has endured in principle. Certain modifications of this procedure were made by himself, Geraghty, Hinman, Lowsley, Wesson, Belt and others, up until the present time.

In our opinion the prostate gland has been removed more frequently by the suprapubic route than by any other method. Eugene Fuller is given credit for performing the first complete transvesical enucleation of the gland in 1895. In 1900 Freyer claimed priority to the suprapubic approach of removing the prostate, but this was later rescinded and he did much to develop and popularize Fuller's technique for suprapubic prostatectomy.

A century and a quarter ago Guthrie described

a prostatic catheter, with an enclosed blade, which could be projected from within the catheter, cutting the median bar at the vesical orifice as the catheter was passed onward from the urethra into the bladder.

Methods of reducing the prostate gland in size by the use of the galvanocautery were introduced about 1873 with the Bottini operation. During the first few decades of this century several men made some progress toward the transurethral attack on the gland in order to relieve, to a degree at least, its obstructing symptoms. The most prominent of the earlier attackers were Chetwood, Young, Caulk, Braasch and Collings. These were followed by Stern, who invented an ingenious instrument, departing from the punch-type cutting instrument spoken of as a punch. Stern's health failed at this time and he never sold his claims for his instrument to the profession. At the Miami meeting of the Southern Medical Association in November 1929 a paper was read on suprapubic prostatectomy, and a young doctor, T. M. Davis, from Greenville, South Carolina, discussed this presentation. He electrified the audience by claiming that he could remove all of the prostate with Stern's instrument with less mortality and morbidity than was being accomplished by any other method in the hands of others at this time. This spark created by Dr. Davis was a little slow to catch on. However, it served as a spur to activate the advocates of the punch operation on the gland, but it soon became evident, in the words of Elder, "If you don't get on this wagon, it is going to run over you." Men like Alcock, McCarthy, Kirwin, Folsom, Nesbit and many others fanned this blaze into a roaring urologic advent. All surgical approaches to the alleviation of prostatism were greatly assisted by the competitive efforts of the followers of each method. Continued reduction in the length of hospitalization, as well as mor-

tality and morbidity, were brought about by the use of sulfonamides, antibiotics, Gelfoam and the development of the bag catheter by Foley. Urosepsis and drainage were better handled by the application of one or more of these procedures.

The advantages derived from the use of sulfonamides, antibiotics, Gelfoam and the Foley bag catheter were pretty well understood by the time Millan came along with his retropubic enucleation of the prostate, and all surgical approaches had undergone further evaluation, with minor or major modifications to portions of the surgical technique previously established or developed by individual surgeons.

As is true with surgical procedures in general, the surgical removal of the prostate is not as formidable an operation today as it was twenty-five years ago. Many improvements have been made in surgical technique. We have more efficient means of controlling infection; and infection and blood loss, the two most common causes of mortality and morbidity, have been practically eliminated. Such advantages as these, with early ambulation, have reduced the average hospital stay to about seven to ten days. The knowledge of such advances has stimulated the interest of lay people, and they readily bring the urologic patient in for survey and treatment before severe damage has occurred. The bad risk patients with chronically distended bladders, severe infections and uremia are rarely encountered today.

In 1926 Wade reviewed the mortality statistics for prostatectomy in the large hospitals of the country. He figured the mortality rate at 25 per cent. Recently we have found in the literature many large series of cases of all types of prostatectomy, with a mortality rate of only 1 to 3 per cent, and it is not uncommon to find reports of several hundred consecutive operations without a single mortality.

In the late 1920's I was in Keyes Clinic at the Bellevue Hospital in New York City. At that time he was advocating the two-step suprapubic removal of the prostate. After the gland was removed he closed the incision around a Marion drain. He would reach down this drain with sponge forceps and remove a sizable clot, sometimes two or three such clots before the patient was removed from the surgical table. At that time we were most concerned about postoperative hemorrhage, and inquired of Dr. Keyes why some method of hemostasis was not utilized. His reply was: "The patient seldom if ever bleeds to death; that nature contracts the vesical neck and prostatic capsule after removal of the prostate gland by blunt dissection, similar to contraction of the uterus following delivery of the placenta."

Suprapubic prostatectomy today is a one-step operation as advocated by Rose and others. Each operator may have minor deviations from a set procedure but in our case we claim no originality along this line. We have the patient brought to the operating room with an indwelling catheter in situ. The patient is placed on the operating table in a prone position, or, if he is obese, a slight Trendelenburg position is used. Distention of the bladder is now accomplished by gravity flow, using sterile water, as we see no benefits to be derived from the many medicated solutions mentioned in the literature. A midline incision is made from the pubic crest upward to a point not exceeding the junction of the lower two-thirds with the upper third of the umbilico-pubic space. This incision is carried down through the skin and fascia exposing the musculature. Muscles are separated by blunt dissection and peritoneal fold is reflected upward from the bladder. With an 18-gauge hypodermic needle a stab is made through the midline of the exposed bladder, at a superior point below the peritoneal fold. The bladder content is noted to well through the lumen of the needle, which is then removed. A guy suture of No. 2 catgut is made through the bladder wall 1 cm. on either side, lateral to the point where the hypodermic needle entered the bladder. Both ends of the sutures are left long and tagged, so they can be used for traction, then later they are used to fasten the bladder to the inferior surface of the muscle wall after closure of the bladder wound. A stab wound is now made midway between the two guy sutures just introduced, and the bladder is emptied by overflow and suction. The edges of the wound are caught with Allis clamps, the wound enlarged if necessary, and the interior of the bladder explored, the indwelling catheter being a point of orientation during this procedure before its removal.

The prostate is removed by blunt dissection digitally. A bladder retractor is introduced and under vision the prostatic cavity is packed with hot packs which do not stretch the capsule lining of the prostatic cavity. Too much pressure not only increases infection but may be a factor in causing excessive bleeding by preventing the normal contracture of the vesical neck and prostatic capsule, these having an abundance of smooth muscle fibers which, like all smooth muscle fibers, possess the inherent properties of tonicity and resistance to extension. Very little bleeding is noted, and if a spurter is seen it is ligated with a figure-of-eight suture, being careful not to encounter the ureteral orifice or any of the intramural portion of the ureter, remembering that a large prostate distorts the blood supply and adjacent tissues, similar to the distortion of the blood supply and adjacent tissues of the uterus by fibroids. It can

be noted that the prostatic cavity is contracting. A 22 F. Foley catheter with a 30 cc. bag is introduced through the urethra, and its distal end grasped and pulled up within the bladder. A Ritter prostatectomy cone is threaded over the catheter, the bag of the catheter inflated 30 cc., and with slight traction the Solusponge is pulled down within the prostatic cavity, the inflated bag holding it there and preventing the prostatectomy cone from being squeezed into the bladder by contractions of the prostatic capsule. Slight traction is maintained on the catheter until the patient is in the recovery room.

After careful inspection and exploration of the interior of the bladder, the retractor is removed. A 22 F. Foley catheter, with the 5 cc. bag inflated, is introduced within the bladder suprapubically, and allowed to emerge from the superior angle of the wound. The incision is then closed around the catheter in two layers. We use a running suture of plain catgut for each layer. The second suture line catches the first so that a potential space for extravasation or infection between the bladder layers will not exist.

A rubber tissue drain is placed in the space of Retzius. The guy sutures are brought through the recti muscles and tied loosely, thus holding the bladder in close proximity to the recti muscles. The muscles are brought together with interrupted chromic gut, and the fascia is closed with running sutures of chromic gut. The skin is brought together with three or four sutures of black silk, and the intervening gaping closed with skin clips. The wound is dressed and the patient sent to the recovery room where through and through irrigation of sterile water or boric acid solution, 40 to 50 drops per minute, is started through the urethral catheter, exit being through the suprapubic catheter.

After transfer of the patient from the recovery room to his room the irrigation is reversed, entering the bladder through the suprapubic catheter and leaving through the urethral catheter. To facilitate the dissolving and evacuation of any clots which remain within the bladder at the end of twenty-four hours postoperative, 1000 cc. of the irrigation fluid are allowed to flow through and through rapidly by way of the urethral catheter. This is likewise followed by the rapid flowing of 500 cc. of fluid, this time entering through the suprapubic catheter. The dressings are not wet so are not molested. The bag of the suprapubic catheter is now deflated and the catheter removed. The rubber tissue drain is usually removed at this time. The patient is allowed to stand on his feet and to take a few steps with assistance. Ten cc. of fluid are then removed from the bag of the urethral catheter. This catheter is

strapped in at the end of forty-eight hours postoperative, and the remaining 20 cc. of fluid removed from the catheter bag. The dressings have little or no soiling, and are not disturbed until the fifth postoperative day when they are changed at the time the skin clips and urethral catheter are removed. The patient begins to void and the suprapubic drainage is slight or not at all.

303-4-5-6 Van Antwerp Bldg.

BIBLIOGRAPHY

Alexander, J. O.: Suprapubic Prostatectomy, *J. Internat. Coll. Surgeons* 21: 532-534, April 1954.

Baker, W. J., and Graf, E. C.: Evaluation of Oxygel-Bag Catheter Technique in Suprapubic Prostatectomy, *J. Urol.* 67, 1952.

Goldstein, A. E., and Rubin, S. W.: Complete Occlusion of the Vesical Orifice Following Suprapubic Prostatectomy. Review of the Literature and Report of Three Cases, *J. Urol.* 60, September 1948.

Reagan, J. R.; Taylor, F. W., and Riggs, R. E.: A Simplified Technic of Suprapubic Prostatectomy, *South. M. J.* 49: 1033-1036, September 1956.

Reaves, J. Ullman: A Surgical View of the Prostate, *J. M. A. Alabama*, March 1953.

Reaves, J. Ullman: Surgery of the Prostate Gland, *J. M. A. Alabama*, August 1951.

Reaves, J. Ullman: Transurethral Resection of the Prostate, *J. Florida M. A.*, January 1934.

Robertson, J. P., and Cohn, S. K.: Prostatectomy. A Comparison of the Results of the Retropubic and Suprapubic Approach, *J. Urol.* 64, August 1950.

Scholl, A. J.: Prostatectomy. An Evaluation of Methods, *S. Clin. North America* 34, December 1954.

Shivers, de Turk: Problems Encountered in the Treatment of Prostatism, *J. Urol.* 78: 780-787, December 1957.

Taylor, W. N.; Kaylor, W. M., and Taylor, J. N.: Retropubic and Suprapubic Prostatectomy. Comparative Clinical Study, *J. Urol.* 74, July 1955.

Thumann, R. C., Jr., and Stump, George D.: Suprapubic Transvesical Prostatectomy with Primary Closure of the Bladder Using Oxidized Cellulose. An Analysis of 100 Cases, *J. Urol.* 67, January 1952.

Willner, C. E., and Hamm, R. S.: The Radical Control of Prostatectomy Hemorrhage, *A. M. A. Arch. Surg.* 73: 790-792.

A. M. A. Publishes New Physician Directory—The United States and Canada have a population of more than 250,000 physicians.

These physicians are all listed in the new 20th edition of the American Medical Directory published Sept. 30 by the American Medical Association.

The directory lists 250,621 physicians as compared to 240,638 in the 1956 edition.

Published as a service to physicians and the public, the directory lists for each physician his age, address, date of licensure, specialty, and membership in specialty medical groups.

The U. S. has 90,359 general practitioners in private practice and 77,655 specialists. There are 7,320 doctors in medical schools, research, and other work outside of private practice, and 17,303 holding full-time jobs on hospital staffs.

A RITUAL FOR DIAGNOSTIC UTERINE CURETTAGE

BUFORD WORD, M. D.

Birmingham, Alabama

Uterine curettage is the operation most frequently performed on women the world over. It is performed as a therapeutic measure to remove retained placenta in postabortal and postpartal patients in whom the diagnosis has been definitely established. More often, it is performed for diagnostic purposes, to determine the cause of abnormal uterine bleeding, or the source of positive cells in a vaginal smear.

Because of the frequent use of diagnostic curettage in the early detection of cancer of the female genital tract, the following ritual for the proper execution of this operation is recommended.

The patient is anesthetized and placed in the lithotomy position. The vagina and perineum are scrubbed with soap and water and sterile drapes are applied.

1. CATHETERIZE THE PATIENT

An empty bladder facilitates accurate bimanual pelvic examination. A full bladder may be mistaken for an ovarian cyst or a pregnant uterus.

2. DO BIMANUAL PELVIC EXAMINATION

A thorough bimanual pelvic examination should be done on every patient anesthetized for uterine curettage. Pelvic examination under anesthesia yields more information than when done in the office, clinic or hospital bed. The size, shape, position and mobility of the uterus should be determined and a search made for the presence of any extrauterine masses. It is well known that many patients subjected to curettage for abnormal uterine bleeding may harbor carcinoma of the ovary or lower intestinal tract which will not be detected if this step is omitted.

3. BIOPSY CERVIX

In every case of diagnostic uterine curettage, tissue from the squamocolumnar junction of the cervix should be removed for microscopic study with biopsy forceps or by cold knife conization. This step is facilitated if the cervix is grasped at its periphery with a two-pronged Jacobs clamp in preference to a single toothed tenaculum, which has a tendency to lacerate the cervix. Squamous cell carcinoma of the cervix, which originates at the squamocolumnar junction, has a higher incidence than all other malignancies of the female genital tract combined. A properly conducted search for cancer should never omit obtaining tissue from this area. Since trauma inflicted by the dilating instrument may disturb the cellular pat-

tern and prevent accurate microscopic diagnosis, the tissue should be obtained before the cervix is dilated. Further, proportionately more tissue will be obtained if removed prior to dilatation.

4. SOUND THE UTERUS

A blunt ended, malleable sound is gently inserted into the uterine cavity to measure its depth and ascertain the direction of the uterocervical canal. This step is done to confirm the information obtained on bimanual pelvic examination. Knowledge of the measured depth of the uterine cavity is invaluable in diagnosing subsequent accidental perforation of the uterus. Knowledge of the direction of the uterocervical canal is of equal value in preventing accidental perforation of the uterus.

5. DILATE CERVIX

Dilatation of the cervix is best accomplished by the use of graduated dilators and it is preferable that these be perforated. Piston-like action of a solid dilator may result in forcing fragments of tissue into the peritoneal cavity. The cervix should be dilated gradually and force on the dilating instrument applied in the direction of the axis of the uterocervical canal. Obviously, the dilating instrument should never be inserted beyond the measured depth of the uterine cavity. If the dilator is misdirected, false passage or perforation of the uterus is inevitable. As a general rule, the cervix need only be dilated to the size of a No. 12 Hegar which will permit insertion of a small ring forceps or Randall kidney clamp. It is unnecessary to lacerate a fragile cervix by dilating it to admit an ordinary sponge forceps.

6. CURET THE ENDOCERVICAL CANAL

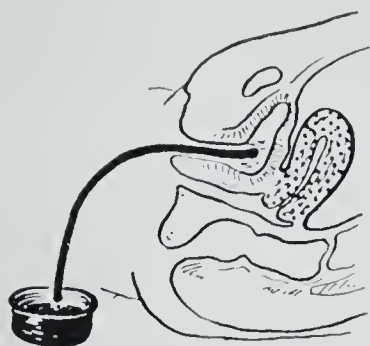
Curettement of the endocervical canal is known as differential or fractional curettage. Although tissue from this area may not be obtained in every instance, it is almost certain to be if cancer is present. Often, it is impossible to differentiate microscopically between adenocarcinoma of the cervix and adenocarcinoma of the endometrium, and since treatment of these lesions differs it is imperative that the site of origin be known. For this reason the endocervical canal and the endometrial cavity must be curetted separately and the tissues obtained from each area placed in separate, marked containers.

7. EXPLORE UTERUS WITH RING FORCEPS

In every diagnostic curettage the uterus should be explored with ring forceps or Randall kidney clamp. One in ten uteri subjected to curettage

From the Department of Obstetrics and Gynecology of the Medical College of Alabama.

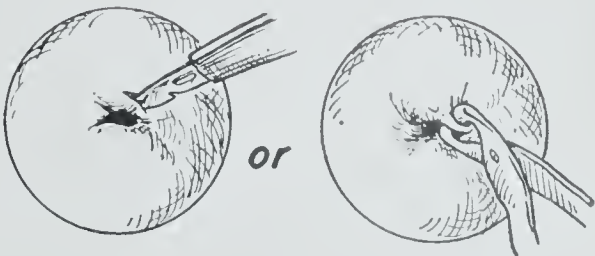
A RITUAL FOR DIAGNOSTIC CURETTAGE



1. Catheterize Patient



2. Do Bimanual Pelvic Exam.



* 3. Biopsy Cervix



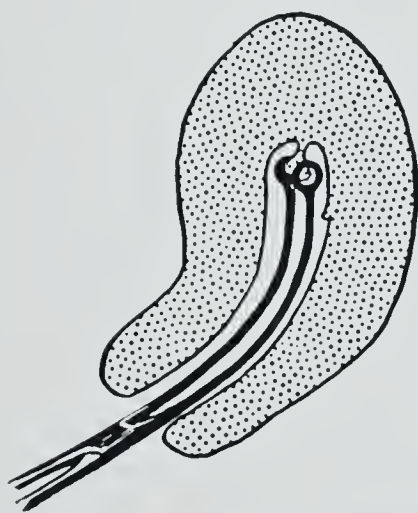
4. Sound Uterus



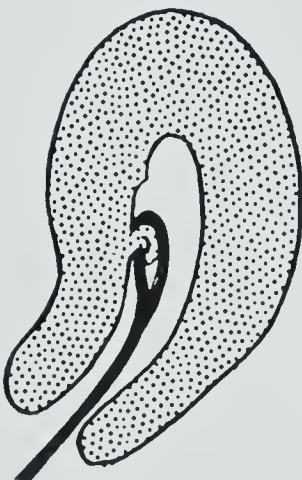
5. Dilate Cervix



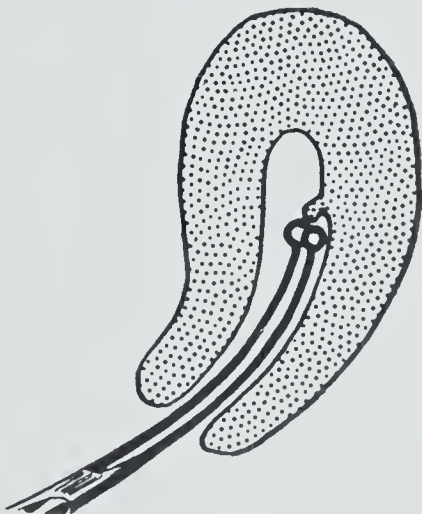
* 6. Curette Endocervical canal



* 7. Explore Uterus with Ring Forceps

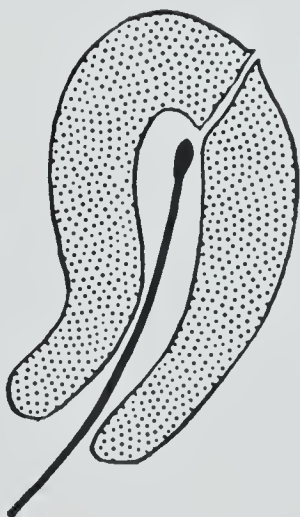


* 8. Curette Endometrium

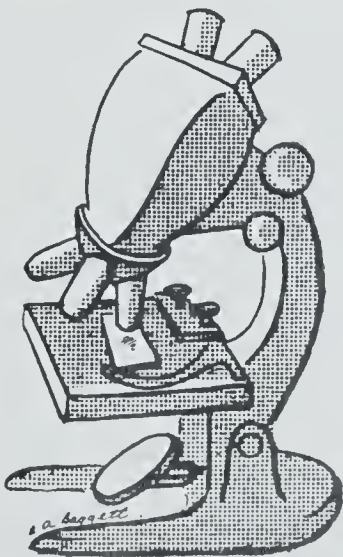


9. Reexplore Uterus for Missed Lesions

10. Resound Uterus for Possible Perforations



ALL Specimens must be sent to Pathologist in SEPARATE, MARKED CONTAINERS



harbors a lesion that will be missed if this important step is omitted. Recently, a patient subjected to diagnostic curettage by the author, for abnormal uterine bleeding and lower abdominal cramps, continued to complain of these symptoms following curettage. Reluctance to admit that a less than perfect curettage had been done resulted in the patient being classified as a "neurotic." She consulted a colleague who removed a pedunculated fibroid two centimeters in diameter from the endometrial cavity, effecting a complete cure. Although forceps exploration of the uterus was done at the time of initial curettage, the pedunculated fibroid was missed. Continuation of the patient's symptoms should have suggested a uterosalpingogram which would have revealed the lesion. Any polypoid lesions removed by ring forceps should be submitted to the pathologist in a separate container.

8. CURET THE UTERUS

The uterine cavity should be gently but thoroughly and systematically curetted using a large dull curet and then a large sharp one. The entire uterine cavity should be scraped counterclockwise. On each stroke the curet is gently inserted until resistance at the apex of the fundus is encountered, then it is gently drawn towards the cervix. As a general rule, the larger the curet the less likely it is to perforate the uterus.

The sensation of the curet scraping against the firm musculature of the uterine wall has been described as the "uterine cry." Recognition of this sound should be cultivated. It indicates that a particular area has been sufficiently curetted. When the "cry" is detected in all areas of the uterine cavity, further scraping may result in traumatic obliteration or perforation.

9. RE-EXPLORE THE UTERUS

The endometrial cavity should again be gently explored with ring forceps for "missed polyps" or any other tissue which may have been loosened by the curet.

10. RESOUND THE UTERUS

As a final step the uterus should be resounded to determine if unsuspected accidental perforation has occurred. If this has happened, no remedial treatment is necessary unless some organ in the peritoneal cavity has been injured or profuse hemorrhage precipitated by the tear in the uterine wall. Emergency hysterectomy for uncomplicated perforation of the uterus only compounds the error.

Microscopic examination of all tissue obtained at curettage shares equal importance with the step by step execution of the procedure emphasized in this ritual. Tissue obtained from the squamocol-

umnar junction, the endocervical canal, polypoid lesions of the endocervix or endometrium and all endometrial curettings should be placed in separate containers. These should be appropriately labeled and sent to the pathologist for microscopic diagnosis.

CONCLUSION

Most patients who consult their physician because of abnormal uterine bleeding are apprehensive that it may be due to cancer. To relieve this fear it is the physician's responsibility to exert every effort to determine, if possible, the exact cause.

Diagnostic curettage or, as the author conceives it, triple biopsy of the uterus may not establish the cause of abnormal bleeding in every patient. However, if the bleeding is due to cancer, curettage performed according to this ritual will reveal the lesion, almost without exception.

Blood Matching in Corneal Transplants Suggested—

Matching the blood of persons donating and receiving corneas for eye surgery may solve one type of transplant failure, three Ohio researchers have theorized.

Writing in the September Archives of Ophthalmology, published by the American Medical Association, they called on all eye surgeons to cooperate in a study to learn the effect of blood type incompatibility on the development of opacity in corneal transplants.

Healthy corneas are removed from persons who have volunteered to donate their eyes within a few hours after death. The corneas are stored in eye banks until being transplanted to persons blinded because of damaged corneas.

A large proportion of corneal grafts become opaque during the first months after surgery, the authors said. Some type of tissue intolerance has been suggested as causing the opacity to develop.

Dr. William H. Havener, Dr. George T. Stine, and Larry L. Weiss, B. A., of the Ohio State University department of ophthalmology, Columbus, think the intolerance might be a blood type incompatibility. When blood types don't match in transfusions, severe reactions occur.

To test their theory, the authors asked eye surgeons to keep records of the blood types of corneal donors and recipients and to submit them to the national committee of eye banks for study. Such a study could show the statistical relationship between corneal opacity and blood type incompatibility.

The authors studied 21 cases of corneal transplants in which the blood types of donor and recipient were known. Of 17 with compatible blood types, 14 remained clear. In none of the four cases with incompatible blood types did the corneas remain clear.

While the study is very small, "it is noteworthy that not a single incompatible donor cornea remained clear," they said.

Chance alone would result in compatible transplantations in two thirds of all cases chosen at random. This happens because almost half of all corneas would be from type O "universal donors" and could be given successfully to persons of any blood type. Four fifths of the remaining corneas would be type A and would be compatible in 43 per cent of recipients, they said. The chances of accurate accidental matching of types B and AB donors and recipients are remote.

CLINICAL STUDIES ON A NEW COD LIVER OIL PREPARATION

RAY O. NOOJIN, M. D.
DOWLING B. STOUGH, M. D.
and
LAMAR S. OSMENT, M. D.
Birmingham, Alabama

The local use of cod liver oil upon the skin has been advocated many times in the past, since the beneficial cutaneous effects of vitamins A and D are well known.^{1a,b} The most serious objection to the topical use of a preparation containing cod liver oil has been the offensive odor. The present study* involves the use of a new preparation containing cod liver oil treated in such a manner as to eliminate most of the characteristic odor.

INGREDIENTS

The preparation** under study was an ointment which contained several ingredients. A description of these, as well as some of the details of production, is as follows:

The Base is an oil-in-water type emulsion and is composed of stearic acid and polyoxyethylene glycol esters emulsified with a pH of 5.4.²

Cod Liver Oil. The oil was procured from sources in Norway. It was carefully refrigerated and stored under CO₂ to eliminate oxidation and eventual rancidity and vitamin loss.³

Ionol (2, 6-di-tert-butyl-4-methylphenol) was incorporated within the formula since it is an excellent antioxidant.² The emulsifiers in the vehicle also helped to control the odor through fine dispersion of the oil. Perfume or aromatic oils were not combined because of their possible irritating or sensitizing effect.⁴

Hexachlorophene. Hexachlorophene is well known as an effective skin disinfectant.⁵ This an-

From the Department of Dermatology, The University of Alabama Medical Center, The Medical College of Alabama.

*This study was aided in part by the Holland-Rantos Company, Inc.

**Hollandex Silicone Ointment—supplied through the courtesy of Holland-Rantos Company, Inc., and Mr. Leo Coel.

1. a) Daughtry, D. C.: Cod Liver Oil Ointment in Surgery, Surgery 18: 510, 1945.

b) Rothman, Stephen: Physiology and Biochemistry of the Skin, University of Chicago Press, Chicago, 1954.

2. Communications with Holland-Rantos Company.

3. The Dispensatory of the United States of America, ed. 25, J. B. Lippincott Co., Philadelphia, 1955.

4. Osbourn, R. A., et al.: Dermatologic Standardization of Perfumes, New York State J. Med. 57: 1069, Mar. 15, 1957.

5. Sindar Technical Bulletin H-4, Sindar Corporation, New York, September 1955.

tiseptic ingredient was incorporated because of its effectiveness against *M. pyogenes*, *Staphylococcus albus*, and *B. ammoniagenes*.⁵ In this regard it appears to be superior to the quaternary ammonium compounds.

Silicone. The silicones are odorless, sparkling clear compounds which are insoluble in water and highly water repellent.³ This agent was added to increase the smoothness of the ointment and to provide a protective water repellent film.

Improved Lanolin. The aliphatic alcohols of lanolin have been thought to be responsible for some of the adverse reactions that may occur when lanolin is used locally upon the skin.⁶ To minimize any untoward reactions the lanolin was made chemically similar to human skin fat instead of sheep's wool fat through denaturation by esterification.

Zinc Oxide. This agent was employed because it is protective, mildly astringent, and mildly antiseptic.³

RESULTS OF CLINICAL STUDY

In Table I it will be noted that 500 dermatologic patients have been treated with the topical application of a preparation containing cod liver oil. The characteristic odor has been largely eliminated by special processes. Although the preparation was not completely odorless, no patient thought it sufficiently objectionable to preclude its use. It should be emphasized that in this study no evidence of sensitization reactions occurred. An over-all percentage of 78.2% were improved, 16.8% were neither affected favorably nor unfavorably, and 5% appeared to be aggravated by its local use. Patch tests of the preparation applied to the normal skin of those made worse were negative. Wherever practicable, paired symmetrical studies were made with a corticosteroid ointment.* If this was not feasible, as, for example, in the management of pruritus ani, the preparations were used alternately. These comparative studies were carried out in 100 patients with pruritic der-

*Either ½% Cort-Dome ointment (Dome Chemicals Inc.), 1% Delta Cortef Acetate ointment (The Upjohn Company), or 0.2% F-Cortef ointment (The Upjohn Company) was used.

6. Sulzberger, M. B.; Warshaw, T., and Hermann, Franz: Studies of Skin-Hypersensitivity to Lanolin, J. Invest. Dermat. 20: 33, 1953.

TABLE I
DERMATOSES TREATED WITH HOLLANDEX SILICONE
OINTMENT AND THE RESULTS OBTAINED

DIAGNOSIS	Number of Cases	Decided Improvement	Condition Unchanged	Unfavorable Response
Neurodermatitis-				
atopic dermatitis	169	129	28	12
Contact dermatitis	71	62	7	2
Stasis dermatitis	35	28	3	4
Nummular eczema	35	26	6	3
Infantile eczema	34	27	7	0
Seborrheic dermatitis	25	20	5	0
Pruritus vulvae et ani	16	12	4	0
Biopsy sites	12	12	0	0
Psoriasis vulgaris	11	5	5	1
Infectious eczematoid				
dermatitis	11	9	2	0
Asteatosis	8	7	1	0
Pityriasis rosea	7	6	1	0
Chronic pyogenic folliculitis..	7	6	0	1
Chronic paronychia	6	5	1	0
Radiodermatitis	6	5	1	0
Lichen simplex chronicus	5	4	1	0
Acne vulgaris	5	3	2	0
Alopecia areata	4	3	1	0
Intertrigo	4	4	0	0
Rosacea	4	2	2	0
Impetigo contagiosa	3	3	0	0
Solar dermatitis	3	3	0	0
Herpes simplex	3	2	1	0
Angular stomatitis	3	2	1	0
Necrobiosis lipoidica				
diabeticorum	3	0	3	0
Keratosis pilaris	3	3	0	0
Papular urticaria	3	1	2	0
Generalized exfoliative				
dermatitis	2	1	0	1
Dermatophytid	2	1	0	1
Totals	500	391	84	25

matoses. Seventy-six per cent of the group treated with the cod liver oil ointment were improved as compared to 87% of those treated with one of the corticosteroid ointments. The two criteria utilized were (1) the subjective symptom of pruritus and (2) the objective clinical response of the lesion.

The cod liver oil preparation appeared to be particularly soothing and non-irritating when used locally upon neurodermatitis-atopic dermatitis, contact dermatitis, pruritus vulvae et ani, and infantile eczema. The ointment appeared to be helpful in minimizing recurrences of contact eczema of the hands in housewives.

DISCUSSION

Unfortunately, the corticosteroid ointments continue to be expensive. A new preparation, Hollandex Silicone Ointment, has been made available for topical dermatologic use and has been found to be satisfactorily effective in a variety of dermatoses. It contains cod liver oil, and, since the odor

has been greatly reduced, patients do not object to its use. The beneficial effect of cod liver oil locally for wounds, burns, ulcerations, and other cutaneous lesions has often been recorded. The other ingredients contained in this preparation were added to reduce further the odor, to control bacterial infection, and to make the preparation more pleasant cosmetically for the patient. The clinical effectiveness of this new cod liver oil ointment compares favorably with that of the corticosteroid ointments, and its over-the-counter cost is decidedly less.

SUMMARY AND CONCLUSIONS

A new preparation containing cod liver oil has been prepared with the characteristic odor greatly reduced. Of 500 dermatologic patients 78.2% found it helpful when used topically. The preparation contained a variety of ingredients, and it is likely that the trend toward the manufacture of multi-purpose, proprietary preparations of this type will continue. As long as they are effective, non-irritating, non-sensitizing, and inexpensive, they should continue to be of value.

Prolonged Pulling of Hair May Produce Baldness—
Prolonged pulling of the hair upward and backward—as in a pony tail—may produce baldness, an Illinois dermatologist warned recently.

It can generally be cured by changing the hair style, Dr. Albert H. Slepyan, Highland Park, Ill., said in the September Archives of Dermatology, published by the American Medical Association.

He knows of 24 cases of baldness occurring in young girls wearing pony tails during the last two years.

The baldness occurred along the side of the head, the back of the neck, and the part—anywhere there was a constant pulling.

Dr. Slepyan named the condition "traction alopecia."

The earliest sign is a mild redness about the hair follicles receiving the greatest traction or pull. Occasionally scaling occurs. After several months, occasional hairs are missing, giving a "plucked" look.

"In well-established cases, matchhead- to fingernail-sized oval or linear areas of baldness were seen radiating in the direction of the point of traction," he said.

If the part was involved, it appeared irregularly widened by the absent hairs.

Among the 24 patients, only two showed any signs of baldness six months after they changed their hair style. One of these patients had worn her pony tail for about 15 months before the first signs of baldness appeared and the other for three years. Among the other patients the earliest signs of alopecia occurred after three months.

Dr. Slepyan is clinical associate professor of dermatology at the University of Illinois College of Medicine.

EXTENSIVE PULMONARY CANDIDA ALBICANS WITH RECOVERY

WM. HARVEY BLANK, M. D.

Birmingham, Alabama

With the advent of broad spectrum antibiotics and their subsequent widespread use, it became evident that an undesirable side action could be expected in some cases. This came about from an unbalancing of the normal body flora with a resulting overgrowth of *Candida albicans*. Such cases were first reported by proctologists as a consequence of persistent rectal itching. Similarly, gynecologists reported a like condition about the vagina, and urologists reported moniliasis of the prostate gland. We are now reporting a nearly fatal case of extensive bilateral pulmonary moniliasis with recovery.

The patient, a 69 year old white female, was admitted to Carraway Methodist Hospital on May 5, 1957 in a moderately lethargic condition. She had been asthmatic from early childhood. During recent years the asthma had become secondary to a rather marked progressive emphysema with its consequent dyspnea. She had also developed a moderate degree of arteriosclerotic heart disease. Prior to the present illness she had had repeated disabling respiratory infections with fever and productive cough. Penicillin had been used on numerous occasions, as had also aerosols with various combinations of bronchodilators. Since she was responding unsatisfactorily to all types of treatment, she was started on an aerosol containing 10 mgm. of Achromycin (crystalline) to each cc. of Benadryl. This was administered at the rate of 1 cc. four times a day. Mycostatin tablets in a dose of 500,000 units four times a day were prescribed but the patient through oversight failed to have the prescription filled. After receiving a total of 35 cc. of the aerosol the patient became progressively more lethargic and she was hospitalized.

On admission she responded slowly to questioning and appeared moderately dehydrated. Both lung fields were filled with musical rales. The temperature was 100, pulse 120 per minute, and respirations were shallow and 36 per minute. The blood count showed Hb. 74%; RBC 3,720,000; WBC 8500. Differential: polys. 75, lymphs. 21, monos. 4. Eosinophils were absent, as is common in older asthmatics. Urine: albumin trace, occasional RBC. The electrocardiogram was negative. X-ray of the chest on May 6 was reported as "minimal chronic peri-bronchial inflammatory disease in both lung fields; moderate emphysema; no evidence of heart failure."

Immediate treatment consisted of oxygen, rectal aminophylline, penicillin, intravenous glucose, saturated solution of potassium iodide, and digi-

talization since the patient had taken digitalis only sporadically.

Examination of scrapings taken from the mouth on May 6 revealed many Monilia. A culture of sputum taken on May 6 was reported on May 7 as showing extensive growth of Monilia. The patient was thereupon started on Mycostatin tablets, 500,000 units each, 3 tablets four times a day. An aerosol containing 100,000 units of Mycostatin to each cc. of propylene glycol (water added to reduce viscosity) was administered at the rate of 5 cc. every 4 hours. Amphotericin B tablets, 500 mgm., were given, 3 tablets every 6 hours. However, because of increasing lethargy, the patient was able to take only the first dose. During the next 48 hours, in spite of supportive measures, the course was steadily down hill and on May 9 she appeared moribund. Respirations became extremely shallow and the patient could not be aroused. The oxygen rate in the aerosol was raised to 15 liters and the nebulizations administered vigorously on a 2 hour schedule. She was transfused with 500 cc. of whole blood.

Within 12 hours there was marked improvement. The voluntary respirations were deeper, the rate had dropped and she became mentally alert. At this point we were again able to start the Amphotericin. An x-ray of the chest on May 11 was reported as "clearing of infiltration in the right lung; opacity in left base consistent with a pneumonitis; patchy pneumonitis right base consistent with pneumonia." A sputum culture was reported as negative for fungi. Improvement was steady from this point on and the patient was discharged ambulatory on May 19. Since then she has had no upper respiratory infections but continues to cough intermittently as she did before the present episode.

COMMENT

The successful treatment of fungus infections has always posed a difficult and almost insurmountable therapeutic problem. Systemic involvement has been most serious and carried a high mortality rate. It is only since the advent of nystatin, marketed as Mycostatin, that encouraging results have been observed, particularly in cases of *Candida albicans*.

Of especial interest in the case reported is the fact that this patient had spent most of her life on farms, taking an active part in work about the barn and fields. It is known that pulmonary involvement with fungi is seen fairly frequently in farm workers.

In retrospect, if pulmonary *Candida albicans* were to have been present in this patient, then the administration by aerosol of a relatively small quantity of Achromycin might well have upset an already delicate balance.

With the continuing increase in the use of the broad spectrum antibiotics, it would behoove physicians to give serious consideration to the use of a drug that would inhibit the overgrowth of fungi. This is of most importance where the antibiotic is to be used over an extended period or to be used repeatedly. Since the literature carries only one reference to the use of Mycostatin in an aerosol, and that in a milder case, it would seem that the result in this severe case would merit its consideration and use in similar cases.

RESULTS

A case of extensive bilateral pulmonary *Candida albicans* is presented which was successfully treated by Mycostatin used in an aerosol. Attention is called to the consideration of using an agent to prevent overgrowth of *Monilia* in the presence of repeated use of broad spectrum antibiotics.

Acknowledgment: We wish to express thanks to Ed. Lanford, Squibb representative in Birmingham, and to the Squibb Company for their splendid cooperation in obtaining for us the necessary supplies of Mycostatin. We also want to thank Dr. Benjamin Friedman at the Veterans Administration Hospital in Birmingham for his kindness in supplying us with Amphotericin B.

Cervical "Smear" Test May Be Needed Only Every Two Years—Routine "smear" examinations for cervical cancer may not be needed any oftener than every two years, a new Wisconsin study has suggested.

If a woman shows no sign of cancer after a cervical smear test and a thorough physical examination, she will probably remain free of cancer for at least two years, three Milwaukee researchers said.

"If these observations can be substantiated the application of the cytological examination will become greatly simplified, since it need not be repeated as often as has been recommended in the past," they said in the September 20 Journal of the American Medical Association.

They based their conclusions on a study of 15,389 women during a three-year period and on their impressions covering a seven-year period.

In the smear technique, introduced in 1943 by Dr. G. N. Papanicolaou, material is taken from the cervix and examined microscopically for abnormal cells.

It has been recommended that all women undergo a cervical smear test at least once a year and perhaps as often as every six months.

One of the major problems with the use of the technique is the lack of persons trained to examine the smears. This problem would be somewhat solved if women had to have the examination only every two years, the authors said.

They discovered that the percentage of women showing signs of cervical cancer decreased each year of the

study because many of the women were having repeat examinations. The cancers that were found were mainly in women undergoing their first examination.

Need for Polio Vaccination During Pregnancy Stressed—Polio vaccination during pregnancy is important because it serves two purposes: combating the "extraordinary susceptibility" of pregnant women to the disease, and prolonging their infants' passive immunity.

These were the conclusions of five University of Minnesota researchers who studied 138 pregnant women. Their study is reported in the September 6 Journal of the American Medical Association.

More than 65 per cent of the women were found to be incompletely protected against the disease. After receiving two Salk vaccine shots during pregnancy, the proportion dropped to 18 per cent.

Before receiving the shots, 33.1 per cent showed immunity to all three polio viruses; 58.6 per cent to one or two types, and 8.3 per cent to none. After the shots 82 per cent were immune to all three types.

The study also indicated that vaccination during pregnancy lengthened immunity in newborn infants.

The authors explained that newborn infants are resistant to certain diseases as a result of receiving antibodies from a mother who has been immunized by natural infection or previous vaccination.

The duration of immunity depends on the amount of antibody present. The higher the antibody level, the longer the immunity lasts. By vaccinating the mother, her own antibody level—and her infant's—is raised.

The study showed that the infants eliminated about half of the polio antibodies received at birth within five weeks. The length of immunity resulting from the remaining antibodies depended on the original antibody level. Some infants still showed some immunity at nine and 12 months of age.

The authors are Dr. Mauricio Martins da Silva, Dr. Konald A. Prem, Eugene A. Johnson, Ph.D., Dr. John L. McKelvey, and Dr. Jerome T. Syverton of the University of Minnesota Medical School, Minneapolis.

Common House Plant Found to Cause Dermatitis—Some species of the popular house plant philodendron have been found to cause a skin eruption similar to that produced by poison oak.

Writing in the September Archives of Dermatology, published by the American Medical Association, two Los Angeles doctors said contact with philodendron leaves produces red blotches and streaks of tiny blisters. They usually occur on the hands and forearms, although they may occur other places.

The number of cases of dermatitis resulting from contact with philodendron is probably greater than generally thought, they said, especially since philodendrons are increasing in popularity as house plants.

The doctors have seen at least 12 cases of philodendron-caused dermatitis in the last few years. The medical literature mentions other cases.

There are approximately 100 species of the genus. The most popular as a house plant is *Philodendron cordatum*, a vine with small, heart-shaped, glossy leaves. Another is *P. selloum*, which has large divided leaves and grows in a mound. The genus belongs to a family different from that to which the poison oak and poison ivy plants belong, although the skin eruptions produced by the plants look alike.

The skin eruptions generally clear after the exposure to the plants is ended.

Authors of the article are Drs. Samuel Ayres Jr. and Samuel Ayres III.

Eye Protection Discussed by A. M. A. Committee—Suspensions that fluorescent lighting may be injurious to the eyes are unfounded, according to a committee of the American Medical Association.

"Fluorescent lighting is not harmful to the eyes. It does not cause visual discomfort if properly installed, maintained, and used," the A. M. A. committee on industrial ophthalmology of the Council on Industrial Health said.

The committee's findings are part of three special reports on eye protection in industrial plants which appeared in the September 6 Journal of the A. M. A.

The study also revealed that:

—Ultraviolet energy from clear blue summer sky light is several times as great per foot-candle as fluorescent light.

—Light from some fluorescent lamps resembles daylight more closely than that from tungsten-filament lamps.

—Heat is the only known physiological effect produced from infrared energy found in present-day fluorescent lighting.

—Glare may occur in any lighting system and can be solved by proper installation and use.

—Noticeable flicker is usually eliminated in modern multiple tube fluorescent installations.

The committee recommends the use of guides set forth by the American Standards Association and the Illuminating Engineering Society to achieve the desired level of illumination.

In a second report to the council dealing with chemical eye injuries, the committee said, "Water is still the most universally available, effective, and practical emergency first-aid treatment of eyes injured by chemicals."

"Published reports of research in the use of buffered neutralizing solutions," the committee said, "have failed to show superiority of buffer instillation over proper water irrigation."

Immediate and thorough flushing of chemicals from the eyes has brought about a tremendous saving of eyesight among industrial employees, they noted.

In a discussion of eye safety equipment, the committee stated that "eye disease is not caused by lenses in eye safety equipment.

"Substandard or improperly fitted lenses may cause annoyance and discomfort, but not disease."

Safety goggles should meet the specifications of the National Bureau of Standards, they said.

"The examination, fitting, and maintenance of eye protective wear should be under the supervision of an eye physician," the committee concluded.

Dr. Edmund B. Spaeth, Philadelphia, is chairman of the committee.

Plastic Lenses Aid Millions—A 450-year-old theory for correcting faulty vision has been perfected to the satisfaction of four million Americans.

Advanced in 1508 by the Italian artist and scientist, Leonardo da Vinci, the theory called for placing a lens in direct contact with the eye.

Until recent years scientists have been thwarted by the fact that lenses they developed were found to be "unsafe, uncomfortable, and almost impossible to fit properly." This was reported in an article appearing in the September issue of *Today's Health*, a publication of the American Medical Association.

The modern "invisible glasses," known as the corneal contact lenses, are tiny pieces of plastic, measuring about one third of an inch across, which rest comfortably on the corneas over the small area covering the pupils.

It is estimated by the article's author, Robert M. Eret,

Chicago, that nearly four million persons will be wearing these contact lenses by late 1958.

He said, "An increasing number of bespectacled seamen, pilots, athletes, policemen, and outdoor workers have been freed by corneal contact lenses from the whim of wind, weather, and jarring motion."

The new type lenses are also becoming popular with actors, actresses, musicians, and young men on the way up in business, who just want to look their best in public, he said.

According to the author, the advantages offered by the new lenses include:

—The ease with which the glasses are kept clean and free of grease, perspiration, and steam, because plastic doesn't attract grease. This enables the near-sighted to shave and shower without losing the soap.

—The return to the wearer of some 15 per cent of his side vision, lost when wearing spectacles.

—The restoration of two-way conversation; people can now look the wearer in the eye.

—The longer period of time that they can be worn as compared with the length for the old scleral type contact lenses. The corneal lens can be worn for periods up to 16 and 18 hours.

—The prescription will last at least three to five years, and possibly as long as 20 years. Prescriptions for common spectacles must be changed every year or two.

Benefits from the new plastic lenses have been expanded to include persons in the so-called "bifocal years"—usually after 40. Thought to be impossible until a few months ago, the close and distance vision corrections of bifocals can now be ground into corneal contact lenses.

While only four million persons soon will be wearing contact lenses, the author estimates that most of the 72 million suffering from defective sight can comfortably wear contact lenses.

"A few people with rare conditions of the eye and lid cannot be fitted, and others . . . simply can't tolerate having something placed against their eyes," the author concluded.

Hip Bursitis Described in A. M. A. Journal—Pain in the lower back and legs may actually be "bursitis of the hip" and not sciatica, according to a Texas orthopedist.

The condition, medically called the trochanteric syndrome, may be treated in the same way as bursitis of the shoulder, Dr. Morton H. Leonard, El Paso, said in the September 13 Journal of the American Medical Association.

Bursitis, a general term for several disorders, usually means the inflammation of the fluid-filled sacs that act as pads between tendons and bones.

In the trochanteric syndrome, the bursae and tendons near the trochanter major are affected. The trochanter major is a projection from the thigh bone near where it joins the hip bone.

As in shoulder bursitis, the usual cause of the trochanteric syndrome is the wear and tear of everyday use, Dr. Leonard said. It is not so common or so well known as bursitis of the shoulder.

The onset is frequently sudden, with pain on the side of the hip extending down the back and side of the thigh. Pain may be referred to the lower back. Local tenderness in the region is constant. If there are calcium deposits in the area, a low-grade fever may occur.

Treatment may include x-ray therapy, diathermy, puncture of the affected bursa, and surgical removal of calcium. Dr. Leonard has also found that injections of the steroid hydrocortisone acetate into the affected part also helps.



Editorials

MAJOR MEDICAL EXPENSE INSURANCE

Ten years ago, at a quiet luncheon in Boston, a new type of health insurance was born. Today, the "baby" is a robust giant that helps protect over 15,000,000 Americans against the financial disaster of a serious illness or accident.

The new product, major medical expense insurance, came to life August 2, 1948, when representatives of the Elfun Society and the Liberty Mutual Insurance Company met at Boston's Parker House.

The Society, an association of management employees of the General Electric Company, was seeking protection for its members against heavy medical costs. The big problem to be solved was the fact that broad insurance coverage of the type desired simply did not exist.

The meeting led to the launching of a pilot health insurance plan February 2, 1949. The plan, which was soon expanded to include dependents and retired workers, was conceived as a supplemental one, designed to pick up where the basic hospital, medical and surgical programs left off.

The Elfun plan soon became widespread throughout General Electric and industry in general. A later refinement, developed with the aid of another insurance company, produced the General Electric Comprehensive Plan, which combines the basic programs with major medical.

Public acceptance of major medical was broad and rapid. By the end of 1957, according to a report of the Health Insurance Council, 13,262,000 persons were protected by the more than 130 insurance companies offering such policies.

Of that number, 12,428,000 were included in group plans and 834,000 in individual and family plans. By June 1, 1958 an estimated 15,000,000 were protected by some form of major medical.

Maximum benefits under such policies range from \$5,000 to \$15,000 and more. In 1957 alone, the amount of benefits paid out totaled more than \$130,000,000.

A typical major medical policy not only picks up where basic hospital, medical and surgical plans leave off but also provides for payment of benefits

for home care, private nurses, specialists and medical devices such as braces and crutches.

A growing number of companies now include in their major medical policies protection against the costs of mental illness and psychiatric care.

Major medical plans include two features—"deductible" and "co-insurance"—which are designed to keep premium rates low and within easier reach of the public, while maintaining maximum benefits at a high level.

Deductible works the same in major medical as it does in automobile insurance; that is, the policyholder pays the initial deductible amount, which most generally will fall between \$100 and \$300.

Then co-insurance takes over. This means that the insurance company pays 75 per cent of the bill and the policyholder pays 25 per cent. In other plans the split is on an 80-20 basis.

How this can work in practice is shown by the actual case history of a three-year-old boy who spilled some hot grease, burning himself badly. It took 83 days in the hospital, a number of blood transfusions, skin grafts and other services to get him well. The bill came close to \$2,400. His father, however, paid \$500 of it, while health insurance took care of the rest.

That father probably never heard of the Elfun Society nor of the luncheon ten years ago but he is one of a growing number of people who have profited from the birth of that new insurance idea.

HOSPITAL ADMISSIONS IN 1957

Hospitals in the continental United States cared for 22,993,000 patients in 1957, more than in any previous year and an increase of more than 900,000 from the 1956 total of 22,089,000, according to the American Hospital Association.

A total of 3,739,259 babies were born in United States hospitals last year, a rise of 248,118 over the 1956 total of 3,491,141 hospital births. On any given day in 1957, an average of 1,320,000 patients and 48,775 newborn infants were hospitalized.

Hospital admissions have risen steadily each year since 1946, when the American Hospital Association began its statistical series. The 1957 sta-

tistics were published in Part II of the annual Guide Issue of *Hospitals*, Journal of the American Hospital Association. The information was compiled from questionnaires sent to 6,818 hospitals in the continental United States.

The voluntary hospitals which care for the great majority of the acute short-term cases in the nation spent an average of \$26.81 a day for the care of each patient, an increase of \$1.82 over 1956. In these hospitals the average expenditure on each patient in 1957 was \$198.39 compared with \$181.43 in 1956. The average patient stay in the voluntary hospitals was 7.4 days, a slight decrease from 7.5 days in 1956.

Patients in voluntary hospitals paid an average of \$1.52 a day less in 1957 than it cost to care for them. Total income from patients in all voluntary hospitals in 1957 was \$2,878,254,000, while expenses were \$3,050,398,000. Patient income made up 94.3 per cent of the total income of all these hospitals in 1957, as compared with 96.1 per cent in 1956. The balance came from contributions, grants and income from such sources as endowments.

The average expenditure per day in 1957 for each patient in the nation's federal psychiatric hospitals was \$9.73. In the voluntary psychiatric hospitals the average expense per patient day was \$14.88, in the proprietary psychiatric hospitals, \$14.70, and in the state and local governmental psychiatric hospitals, \$3.66.

The 6381 nonfederal hospitals in the continental United States reported total expenses of \$5,483,096,000, of which 62 per cent, \$3,402,172,000, was for payroll. These hospitals employed 1,215,388 of the 1,401,232 personnel in all hospitals.

In 1957, an average of 107 personnel per 100 patients were employed in all hospitals, as compared with 101 in 1956. Within this average was a range from 218 personnel per 100 patients in voluntary short-term hospitals to 32 per 100 patients in non-federal psychiatric hospitals.

Other facts released by the Association were:

More than 260,000 professional nurses worked full-time in hospitals in 1957. This included nearly 230,000 nurses as hospital employees and more than 30,000 private duty nurses. In addition, almost 58,000 professional nurses served in hospitals on a part-time basis.

More than half of all United States hospitals were voluntary. Sixteen per cent were proprietary, and 32 per cent were operated by agencies of federal, state or local government.

Ninety-five per cent of all hospital admissions last year were to general hospitals. However, psychiatric hospitals cared for 51 per cent of the total

number of patients hospitalized on any one day.

The general hospitals and the psychiatric hospitals each had 45.5 per cent of the total of 1,558,691 hospital beds in the continental United States. The remaining nine per cent of beds were divided almost evenly between tuberculosis hospitals and other special hospitals.

Thirty-six per cent of all U. S. hospitals had less than 50 beds, 23 per cent had from 50 to 99 beds, 27 per cent had between 100 and 299 beds, and 14 per cent had 300 beds or more.

The 437 federal hospitals, representing 6.4 per cent of all U. S. hospitals, had a bed complement of 183,002. The 173 Veterans Administration hospitals had 120,824 beds, or 66 per cent of the total hospital beds operated by the federal government.

SOUTHEASTERN STATES CANCER SEMINAR

The Southeastern States Cancer Seminar will be held in Tampa, Fla., November 19-21, 1958. The Hillsboro Hotel will be headquarters. Supported by the Florida Division of the American Cancer Society and the Florida State Board of Health, in cooperation with the Florida Medical Association, the Seminar is approved for formal educational credit by A. A. G. P. There will be no registration fee.

NEW BLOOD CLOT DISSOLVING ENZYME DESCRIBED IN TWO J. A. M. A. REPORTS

Striking results in dissolving blood clots in various forms of thromboembolic disease with a new drug Actase have been reported in a recent issue of the *Journal of the American Medical Association* (167, 1695-1709: Aug. 2, 1958).

Two articles on the drug appear in the publication. One, by Dr. Kenneth M. Moser of the District of Columbia General Hospital and Department of Medicine, Georgetown University Medical Center, Washington, D. C., deals with its use in deep venous thrombophlebitis, pulmonary embolism, cerebral arterial occlusion, coronary thrombosis and superficial thrombophlebitis. The second, by Drs. Bernard J. Sussman and Thomas S. P. Fitch of the Division of Neurosurgery, Muhlenberg Hospital, Plainfield, N. J., describes preliminary studies in the treatment of cerebral arterial occlusion.

The drug Actase (fibrinolysin) is a naturally occurring body enzyme. Developed by the Ortho Research Foundation, Raritan, N. J., it is currently undergoing extensive clinical trial and is not yet commercially available.

On the basis of his studies, Dr. Moser reports that the drug may "represent a major advance" in the treatment of thromboembolic disease. He

points out that such diseases currently rank as an important cause of morbidity and mortality.

His studies comprised 52 patients with all forms of the disease. They received intravenous infusions of Actase in dosages up to 90,000 fibrinolytic units (FU). Extensive laboratory tests were undertaken on all patients to determine whether or not side effects existed as a result of the drug.

Main advantages of Actase, according to Dr. Moser, were the following:

1. It induced and maintained an adequate fibrinolytic level.

2. It did not cause hemorrhage and therefore could be used together with anticoagulants. Although 29 patients were simultaneously receiving anticoagulants "no instance of hemorrhage was noted in any patient."

3. Side effects were minor, being restricted mainly to a temperature rise of one degree F. or more. This occurred in most patients, reaching its peak at 10 hours, then declining to normal within the next 10 hours. However, "more recent experience" has indicated that the fever response could be prevented or greatly relieved by aspirin-antihistamine drugs, Dr. Moser said.

Evidence presented in the report indicated that Actase has to be administered as promptly as possible after the onset of symptoms to be effective.

In 18 patients with deep venous thrombophlebitis in the legs, three of whom had suffered one or more pulmonary embolism prior to Actase therapy, results were "consistently encouraging," he stated. In most of them, the affected leg was markedly improved with a decrease in swelling, heat and tenderness after 24 hours, a return to normal in 72 hours, and no recurrence of signs of phlebitis when ambulation was allowed.

Clots in Lungs, Brain And Heart: Eight patients with pulmonary embolism of unknown cause were given Actase within 72 hours of the attack, and in four of them there was evidence that Actase "exerted some beneficial effect."

A striking illustration was a 36-year-old man, admitted to the hospital because of sudden onset of dyspnea and hemoptysis. In spite of various treatments, he became much worse. When Actase was administered, however, the patient had "obviously improved" after three hours. Forty-eight hours later he was asymptomatic.

Another series of 14 patients with cerebral arterial occlusion were treated with Actase, only four of them within 24 hours of the onset of symptoms, Dr. Moser reported.

Seven patients showed some degree of improvement such as return of speech and movement with-

in 24 hours after infusion.

One 51-year-old man had been partially paralyzed by a medical procedure to remove a large berry aneurysm at the base of the brain. For 36 hours he was restless, incontinent, had no movement in his right arm or leg, and his speech was "limited to occasional grunting." Actase was administered and seven hours later the patient began moving his arm and leg. Although still unable to speak he "was able to understand commands for the first time since operation."

After a second dose of Actase the patient continued to improve steadily until three months later when he had "excellent strength" in the right arm and leg and had "regained satisfactory speech."

The series included only one case of coronary thrombosis. However, results in this case were also promising.

A 47-year-old man came to the hospital because of progressively more frequent, severe and prolonged episodes of chest pain. Twenty-four hours after one administration of Actase, the chest pain disappeared, and, when seen three months later, the patient had no symptoms.

Finally, seven patients with superficial thrombophlebitis were treated with Actase, and this series proved especially valuable because the action of the drug on the clots could be measured directly, according to Dr. Moser. In three patients, in whom the clots had existed for more than seven days before treatment, no beneficial effects were noted. Response in the other four cases was good.

Evidence presented indicates, Dr. Moser said, that Actase may "satisfy the major criteria for the ideal fibrinolytic agent, viz., the ability to achieve rapid liquefaction of an intravascular clot without undue toxic effects."

Brain Clot Report: In the second preliminary report on the use of Actase in cerebral arterial occlusion, Drs. Sussman and Fitch also emphasized its potential value, particularly in this type of occlusion where prompt treatment is necessary to prevent irreversible brain damage.

Principal handicap of surgery techniques currently being used, they said, "is the poorly tolerated delay between the appearance of symptoms and the removal of the thrombus."

They stressed, too, the need for treatment with Actase as soon as possible, pointing out that "where a fresh thrombus is the final source of occlusion it is believed that the drug may be effective if administered promptly."

Their studies included three patients with hemiplegia. The site of the blockage was located in each case, and doses of Actase ranging from 25,000 to 100,000 FU were administered over a

period of up to 10 days. No detrimental effects that could be ascribed to administration of the drug were observed in the patients, except mild hypotension and some temperature rise.

In one patient, in which angiograms clearly showed non-filling of the middle cerebral vessels before treatment, good filling of these vessels was seen on the eighth day after treatment. In a second there was some improvement in circulation, and in a third there was no change.

The investigators emphasized that the first patient was seen six hours after the onset of symptoms and that the embolus was believed to be a fresh one. In the second patient, it was felt that an underlying disease process, such as sclerosis, prevented treatment from being effective. The third patient was not seen until one week after the onset of symptoms.

The investigators concluded by stating that, on the basis of initial results obtained with the drug, further studies were being carried out.

GELATIN CAPSULES, DEVELOPED 125 YEARS AGO, REMAIN IMPORTANT TOOLS OF MEDICAL SCIENCE

Just what are those small containers that enclose much of the medicine that millions of people around the world swallow daily?

The dictionary defines capsules as "small rounded containers, often of gelatin, in which medicinal doses are enclosed to be swallowed."

Capsules were first developed in France by Monsieur A. De Mothe in 1833, over a century ago, according to pharmaceutical history.

De Mothe perfected a soft, elastic, one-piece capsule from a mixture of gelatin, glycerin, sugar, and water.

Many of the first capsules were made by filling oiled chamois-skin bags with mercury, which were dipped into gelatin solution. When the solution congealed around the bag, the mercury was removed, allowing the bag to collapse, and the empty capsule was removed.

Capsules, slowly made by hand in that manner, were spheroid in shape, with elongated lips. The lips were removed, and after medicinal ingredients were placed into them, the openings were sealed by applying a drop of gelatin solution.

Gelatin, glycerin, sugar, and water still form the basic recipe for soft-elastic capsules. However the manufacturing process has changed greatly during their 125-year history. Today, an increasing proportion of capsules are the hard, two-piece telescoping type, as the item of choice for refined pharmaceutical powdered products.

"Gelatin—the old reliable—is an amazing material," according to S. L. Shenefield, superintendent of Parke, Davis & Company capsule division, which for over 60 years has been one of the world's largest producers of gelatin capsules.

"Gelatin capsules, although extremely inert, dissolve rapidly," the expert continues. "Only 30 seconds after swallowing, the capsule releases its content in the stomach."

"Capsules are free from sensitization reactions, and irrespective of whether they are to be used in very dry or very humid countries, retain their maximum functional qualities."

Shenefield points out that "samples of Parke-Davis gelatin capsules manufactured over 60 years ago still fit perfectly, and their appearance remains surprisingly transparent."

To produce a single capsule by modern methods, the huge machinery at Parke-Davis sets in motion 40,000 accurate, precision-made casting molds, which resemble short, jewel-bright "fingers." When the capsules have congealed and are assembled automatically, each one is passed over an illuminated surface where trained personnel eliminate defective capsules. A final inspection is then made before the capsules are ready for use.

Humidity and temperature are important in the exacting conditions necessary for modern capsule manufacturing procedures. "75° F., with thoroughly adjusted relative humidity, is considered ideal for production rooms," Shenefield states.

Prior to the 1900's, capsules could be made at Parke-Davis during the winter and fall on a full-time basis. Spring production was limited to nights, while an elaborate air-duct system supplied cool night air necessary for congelation, according to the company's manufacturing records.

Capsule production was impossible during summer months until experiments began with the then-new air conditioning machines.

One of the earliest centrifugal refrigeration air conditioning machines used in industry was installed at Parke-Davis capsule division in 1924 by Dr. Willis H. Carrier, founder of the Carrier Corporation. This original machine is still used as a spare at the 92-year old pharmaceutical house.

Many of Parke-Davis' products are marketed in the form of Kapseals, which are capsules circled with unique colored bands identifying a Parke-Davis product.

Concluding his observations on empty gelatin capsules, Shenefield said, "A telescoping capsule is gelatin and water—plus know-how, money, time, and a desire to produce the best possible product."

ASTHMA AND OTHER ALLERGIES RESPOND TO PREDNISONE AND PREDNISOLONE

Thirty-seven patients, most of whom had a history of asthma for five years or more, were effectively controlled by small maintenance doses of prednisone and prednisolone, according to a report printed in a recent issue of *The Journal of Allergy*.

The clinical investigators, Dr. Henry Sherwood and Dr. James H. Barnard of the Institute of Allergy, Roosevelt Hospital, New York, also reported excellent results in 21 patients suffering from other allergic diseases. All cases reported were followed by the investigators from seven weeks to sixteen months.

Good results were reported in the 37 patients suffering from bronchial asthma. Thirty of this group were effectively controlled with daily maintenance doses of 15 mg. or less of prednisone and prednisolone (Meticorten and Meticortelone). The remaining seven asthma patients were controlled with a dosage of 20 to 40 mg. of the steroids each day.

Of the thirty-seven asthmatics, the investigators reported that 73% were over 40 years of age and the remaining 27% were between 20 and 40. Only one of this group had been ill with the disease for less than one year and 87% of the patients had a history of asthma exceeding five years duration.

Excellent results were obtained in 21 patients suffering from various allergic diseases, including chronic dermatitis, perennial rhinitis or seasonal rhinitis, with dosages of prednisone and prednisolone smaller than those used in treating the asthmatics.

Satisfactory response to the steroids was not influenced materially by the presence of complicating diseases, age of the patients, duration of symptoms or the severity of the disease itself.

AMA JOURNAL ARTICLE REPORTS ON NEW STEROID THERAPY

Use of the new steroid triamcinolone in the treatment of systemic lupus erythematosus in 29 patients proved beneficial, but serious side-effects were observed, it was reported in the July 26 issue of the *Journal of the American Medical Association*. Dr. Edmund L. Dubois, of Los Angeles, contributed the article.

Among the side-effects observed were excessive growth of facial hair among women and profound muscle weakness.

Systemic lupus erythematosus is a chronic disease which can have symptoms similar to rheumatic fever or rheumatoid arthritis but is more serious than either. A chroniccrippler, this disease manifests itself in fever, sore and swollen joints, face rash and eruptions, and heart damage.

In most cases it is progressively fatal. The exact cause of the disease is not known to medical science.

Eighty-eight per cent of patients with this disease are female, according to the article. Twenty-one females were involved in the study reported.

While clinical improvement with the new steroid closely paralleled those obtained with other anti-inflammatory hormones, there were, nevertheless, certain side effects not caused by the older, more widely used steroid products.

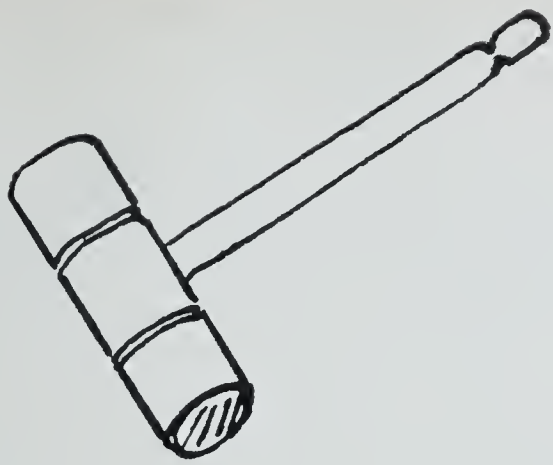
"The most serious side-effect of triamcinolone therapy," wrote Dr. Dubois, "was the appearance of profound muscle weakness, particularly in the extensor muscles of the legs and occasionally in the deep muscles of the back. The patients were characteristically unable to rise from a chair without using their hands or to climb stairs without holding on to the banister. If asked to squat down, they could not rise to a standing position unaided. There did not appear to be a relationship between the largest doses and the development of this side-effect. The onset of this change was insidious, but, when fully developed, it was profound and necessitated cessation of the steroid therapy in all six cases. . . Two patients were transferred to prednisone and four to hydrocortisone therapy in equivalent dosages. About two weeks after transfer their strength gradually began to return to normal."

Dr. Dubois reported that triamcinolone also produces "an increased severity of cutaneous (skin) changes, such as Cushingoid appearance (swelling of the face and limbs), acne, hirsutism, and striae (streaks), greater than existed with older hormones of this type."

In one case cited, a 16-year-old girl developed excessive facial hair within four weeks of treatment with triamcinolone.

Five patients in the treated group of 29 had received the benefits of prednisone therapy prior to transfer to therapy with the newer hormone. Wrote Dr. Dubois: "Severe hirsutism was noted in 21 per cent (six cases) in the triamcinolone group as against 3 per cent in the prednisteroid group . . . It was much more marked than I have seen with the older steroids. At times the entire forehead was covered with hair."

In another study, 16 patients were treated with another new steroid product, methylprednisolone. Dr. Dubois wrote: "No advantages of this steroid over the older ones have been observed." In one case he cites, a patient who had developed muscular weakness on therapy with triamcinolone was switched to hydrocortisone. The weakness disappeared. The patient was then started on methylprednisolone and within two months she had the identical recurrence of muscle weakness.



President's Page

ASSOCIATION AFFAIRS

With the end of six months of this year's activities, I wish to give you a brief report on the progress of our affairs. Our committees have been most active. The Committee on Aging held a meeting and has asked for space on the program at the next annual meeting for a symposium on the problem of advanced age. Time for this symposium has been granted and I am sure that it will be one of the most profitable parts of the program. Jack Kirschenfeld, the Chairman of the Committee, will attend a meeting of the Committee on Aging of the American Medical Association in Chicago in September. No doubt he will gain some important information. Paul Nickerson's Committee on Rural Health met and outlined some work in their field. Bob Berson has been most active in exploring the possibilities of extending the scope of indigent care in Alabama. As you know, most organized indigent care is carried out in a relatively few large counties. He hopes to make it a state-wide project. I do not believe that the Committee on Medical Care for Industrial Workers has met during this calendar year but Bryce Robinson has attended a meeting of the American Medical Association committee to study the affairs of the United Mine Workers and has made a most comprehensive report. The Committee on Legislation had a lengthy meeting in Montgomery and came to grips with some of the real problems that confront us. Dr. Brooks Bishop presented to the Committee a proposed revision in the law providing for coroners and medical examiners. It was a most comprehensive study and the Committee approved the revision. The ever-present problem of the chiropractors was taken up by this Committee. After a long discussion, in which every apparent avenue of thought on the subject was explored, the majority of the Committee passed a motion which suggested that we attempt to change our present medical practice act and to establish a law designed after the Tennessee law. The vote was not unanimous but represented the earnest thinking of the majority of the Committee. The motion provided that this proposal be submitted to the Board of Censors for its study and recommendation. If the Board of Censors approves this motion, of course it will be submitted to you for your final

approval at our next annual meeting. Space does not permit me to give you the provisions of the Tennessee law but in time I am sure they will be sent to you. I hope that you will give the law your earnest attention because it is a matter which you will have to face at your next meeting. Before passing on from the Committee on Legislation let me commend Vaun Adams for the tremendous amount of work he has done for the Association. Julius Michaelson had a meeting of the Committee on Public Relations in September. The main item on the agenda was a discussion of our booth to be placed in the Alabama State Fair. In past years this booth has created considerable favorable comment and I am hopeful that it will again be instituted this year.

The Building Committee has been most active on the important project of building us a home. At the last meeting of the Association you instructed us to build a building and provided funds up to \$140,000. Several members of the Association suggested that there might be some doctors and some County Medical Societies who would like to make personal contributions to this building. With this in mind your President wrote a letter stating that such contributions would be acceptable and would be most helpful in the building of our building. The response was most gratifying and we have received and are still receiving money that will aid greatly in building and equipping the Association home. In behalf of the Association I wish to thank each one who has contributed to the program. The Building Committee employed Mr. Streeter Wiatt of Montgomery as architect. He has developed plans for a building which we all feel are most satisfactory. Bids were received on September 9, and the bid of C. F. Halstead was accepted. Construction of the building should begin shortly and I think it is reasonable to expect that it will be ready for occupancy in February 1959. I cannot commend too highly Dr. Luther Hill, Chairman of this Committee, for the tremendous amount of work that he has done and for the many details that he has handled in arranging and financing this project. The Association owes him a real vote of thanks. It is a most satisfying feeling to me to realize that we will soon have a home of our own. An important Association such as ours and one

which conducts so much important business should have a home. I feel that ours is one that we will be able to look to with pride. I am particularly pleased that the bronze busts of Dr. Cochran and Dr. Sanders, which used to stand in front of the old Health Department building to the right of the Capitol, will be placed in appropriate places in this new building. They will tend to establish a con-

tinuity with our early history and add real charm and stature to our building.

Colgan J. Furman



ORGANIZATION SECTION

NEWS IN BRIEF

The State Rural Health Council is now establishing councils in nine counties for a pilot run. The four-point program which was approved last year will form the basis for county work, but local groups are urged to adapt the basic program to conditions in their communities and expand it to encompass their needs. The four-point program consists of: (1) polio vaccination; (2) preschool immunization; (3) sanitation—rat eradication and water testing; (4) periodic physical examination.

Dr. Paul Nickerson, Sylacauga, Chairman of the State Council, has announced the following chairmen of their respective counties: (1) Dr. Fred S. Whitfield, Marengo; (2) Dr. John Foster, Baldwin; (3) Dr. W. A. Edwards, Elmore; (4) Dr. Paul Nickerson, Talladega; (5) Dr. W. C. Browne, Shelby; (6) Dr. J. Paul Jones, Wilcox; (7) Dr. E. Julian Hodges, Jackson; (8) Dr. Dale Brown, Fayette; and (9) Dr. Kendall Eppes, Barbour.

When the pilot councils have operated through a test period, plans will be made to expand the program to cover the 67 counties in the state.

Medical Assistants Courses—The Medical Association of the State of Alabama and the University of Alabama plan to co-sponsor courses for medical assistants throughout the state of Alabama again this year.

It was the unanimous decision of the two groups at a recent planning meeting to give the University of Alabama authority to formulate a continuing program for medical assistants in Alabama. The University of Alabama will formulate three or four

courses of study directed toward a specialty and submit them to the Committee on Public Relations for consideration and approval.

The decision to formulate a continuing program for medical assistants in Alabama was reached after last year's total enrollment for introductory courses exceeded 500.

Emergency Call System—A survey of approximately 125 hospitals in the state is being conducted under the direction of Dr. Norton E. Cowart, Huntsville, chairman of the Subcommittee on Emergency Call Systems. Hospital administrators have been asked to outline their plans, estimate the degree of effectiveness, and make suggestions that would help those towns not covered by an emergency call plan to set up one. Replies have been received from more than half of the hospitals in the state and the information obtained will be used by the committee to evaluate the need for further work along this line.

COMMITTEE APPOINTMENTS

Dr. James H. Meigs, Anniston, has been appointed to fill the unexpired term of Dr. D. E. Owensby on the Committee on Finance.

Dr. Elmer L. Caveny, Birmingham, has been appointed to fill the unexpired term of Dr. T. D. Rivers, deceased, on the Committee on Mental Hygiene.

The new subcommittee on press relations of the Committee on Public Relations is headed by Dr. J. D. Bush, Jr., Gadsden. Drs. L. D. McLaughlin, Ozark, and John Chenault, Decatur, have been named members of the committee.

DOCTORS WORK WITH COACHES FOR PREVENTION OF ATHLETIC INJURIES

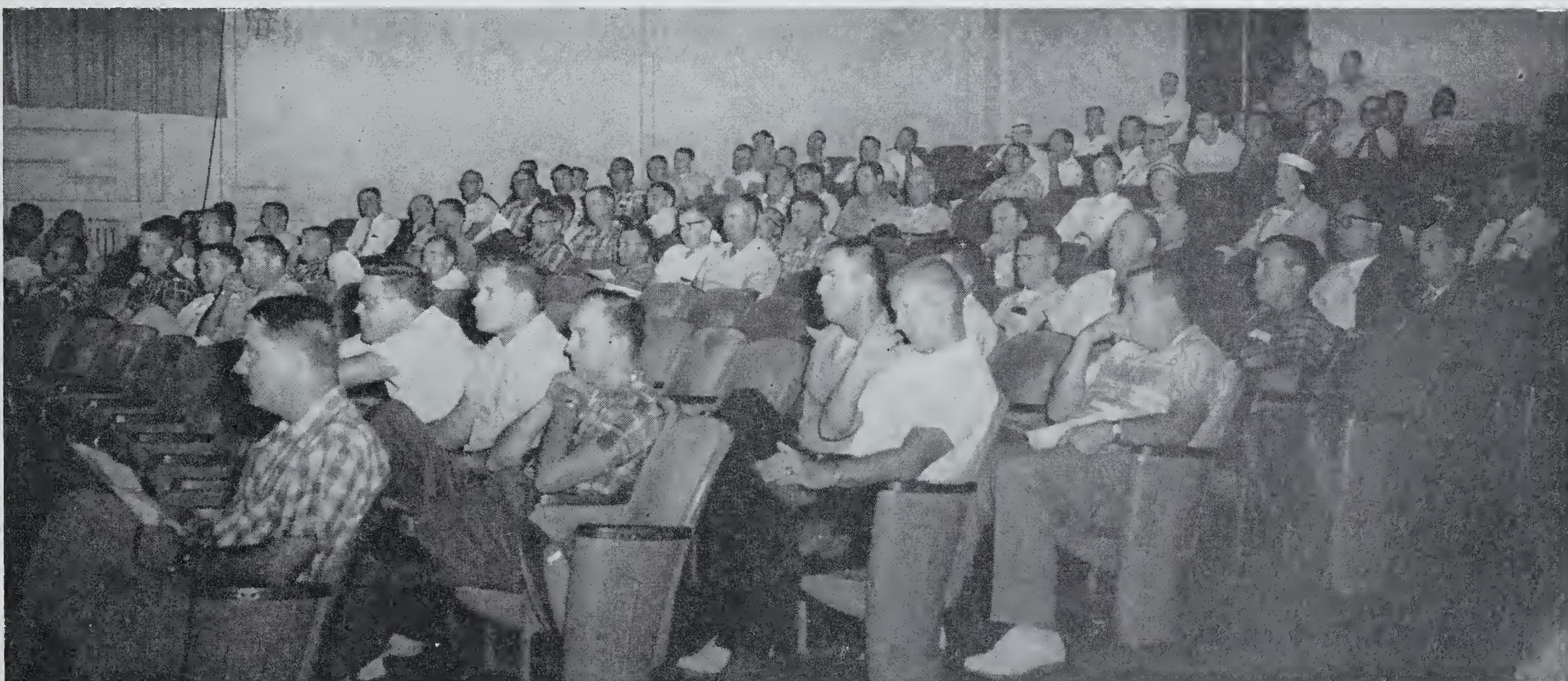


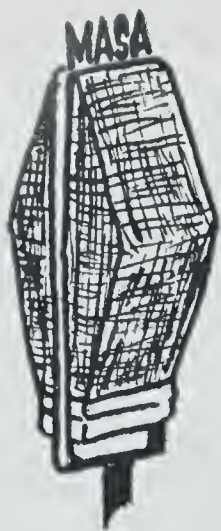
A highlight and innovation in the Coaching Clinic at the University of Alabama in August was a panel discussion by members of the medical profession on Management and Prevention of Athletic Injuries. The Medical Association of the State of Alabama presented the panel in cooperation with the Alabama High School Athletic Association and Alabama High School Coaches Association.

Shown above are principals on the panel: seated left to right, Dr. Richard O. Rutland, Jr., Fayette;

Dr. Otis L. Jordan, and Dr. Alfred E. Tatum, Tuscaloosa; standing left to right, Dr. Alfred R. Earl, Mobile; Mr. Cliff Harper, Montgomery, executive secretary of the Alabama H. S. Athletic Association; moderator, Dr. J. Michaelson, Foley, and UA Trainer Jim Goostree, Tuscaloosa.

The lower picture shows a cross section of the more than 200 coaches and physicians who attended the conference.





ASSOCIATION FORUM

WORLD HEALTH ORGANIZATION

The World Health Organization (WHO), with headquarters in Geneva, Switzerland, now groups 88 countries with the aim of protecting the health of all peoples. WHO works with national health services to prevent infectious disease (malaria, tuberculosis, syphilis, etc.), and to train health workers. It gives technical assistance to improve sanitary conditions in over 100 countries, warns of outbreaks of epidemic disease, coordinates research, and recommends international standards for drugs and vaccines.

Dr. M. G. Candau is Director-General in charge of a staff (including field staff) of about 1,000 professionals of 54 nationalities. WHO's budget, contributed by member states, is \$13,500,000 for 1958.

WHO celebrates its 10th anniversary this year at a special session of its governing body, the World Health Assembly, held in Minneapolis, beginning 26 May.

HOW WHO BEGAN

The World Health Organization, like the United Nations, was an outcome of the world-wide longing for peace and international understanding which inspired the United Nations Charter.

In April 1945 the San Francisco Conference which set up the United Nations Organization approved a joint proposal from Brazil and China that an international health organization should be established.

In June 1946 the United Nations summoned an International Health Conference in New York, at which the Constitution of the World Health Organization was drafted, adopted and signed by representatives from 61 countries.

It was decided that the Constitution should come into force when 26 member states of the United Nations had ratified their signatures. This happened on 7 April 1948, a date now observed each year as World Health Day.

Meanwhile an *Interim Commission* had been carrying on essential international health services and preparing the way for the World Health Organization, to which it formally handed over re-

sponsibility in September 1948.

Meeting for the first time in June 1948, WHO's governing body, the *World Health Assembly*, approved the programme and the budgets for 1948 and 1949, and appointed Dr. Brock Chisholm (Canada) as Director-General.

A CENTURY OF EFFORTS

The World Health Organization is the culmination of a century of efforts towards international health cooperation.

In earlier times sickness was considered a purely personal misfortune, and governments had little concern for health matters.

From the 14th century onwards, some countries and ports introduced harsh and often cruel quarantine measures in an effort to protect themselves against the plagues of history, but with little success.

By the 19th century these ineffective quarantine regulations, mostly directed against plague, cholera and yellow fever, were causing enormous hardship and costly delays to shipping and trade, and from 1851 onwards a series of international conferences were called, in Europe and in America, to try to come to some agreement on methods of protection against epidemics and to bring some order into the confusions, contradictions and abuses of existing quarantine regulations. By 1900 several international sanitary conventions were in force.

It was not until the early years of the present century, however, that sufficient agreement was reached for international health organizations to be set up.

The *Pan American Sanitary Bureau* was created by the American republics in 1902. It was designed "... to lend its best aid and experience towards the widest possible protection of public health of each ... republic, in order that diseases may be eliminated and that commerce between the said republics may be facilitated." It was given broader public health authority by the Pan American Sanitary Code of 1924, a treaty ratified by all of the 21 American republics. In 1949 the Bureau assumed

an additional role as the Regional Office for the Americas of the World Health Organization.

The *Office International d'Hygiene Publique* (OIHP), set up as a result of discussions at international health conferences held in Paris in 1903 and in Rome in 1907, was the first truly world-wide international health organization. The OIHP was finally constituted in 1908, and in 1909 its secretariat was established in Paris, France. It was a technical commission for the study of epidemic diseases, a permanent body for revising and administering the numerous International Sanitary Conventions, and a centre for the rapid exchange of epidemiologic information, in which it collaborated with the Pan American Sanitary Bureau and other centres. Fifty-five countries were represented on its governing body.

The *Health Organization of the League of Nations* was established in September 1923, and undertook a varied range of activities. It received and distributed intelligence concerning the occurrence of epidemic diseases, set up an epidemiologic bureau at Singapore (now operated by WHO), began the establishment of international standards for vaccines, sera and certain important drugs, and undertook expert studies on nutrition and housing as well as on a number of diseases and health problems of international importance.

The Health Organization of the League marked a new departure in international health work which was no longer concerned merely with the erection of sanitary barriers, but embraced a wide and ever-growing range of health fields.

The work done both by the OIHP and the Health Organization of the League has been taken over and expanded by the World Health Organization.

At the end of the war, the *United Nations Relief and Rehabilitation Administration* (UNRRA) was established, and its Health Division was given the task of restoring and assisting national health services dislocated as a result of the war, providing medical care for displaced persons, and reviving the machinery for international exchange of information on epidemic diseases. When the work of UNRRA was terminated in 1946, \$3 million was made available from its funds to WHO's Interim Commission to enable it to continue to provide direct technical assistance to countries in the field of health.

WHO HAS CARRIED ON

The World Health Organization has carried on the international duties inherited from all these earlier bodies; it broadcasts daily warnings of the occurrences of pestilential disease to health administrations, port health officers, airports and ships at sea; it has replaced all the earlier international sanitary conventions by one uniform set

of sanitary regulations governing travel and trade; it has published the first International Pharmacopoeia giving international standards for the strength and purity of important drugs, and has recommended standards for a large number of vaccines, sera, antibiotics and other biologic substances.

NEW RESPONSIBILITIES

But the World Health Organization has taken on new and even more important responsibilities. Where many of the earlier health bodies were concerned above all with trying to prevent disease from spreading across frontiers, the World Health Organization, by its very Constitution, refuses to accept as part of the natural order the existence of preventable disease and suffering over a large part of the world. It has therefore set out to aid national health authorities in stamping out pestilential diseases in source areas, in strengthening their health services, and in bringing about the basic sanitary reforms essential for better health. It acts as a clearing house for the exchange of information, and enables all countries to profit from new discoveries and techniques in the field of health. WHO is founded on the concept that only united action by all countries can bring about that improvement in levels of health which is essential for world peace and prosperity.

HOW WHO WORKS

The World Health Organization is an international cooperative for health. The members of this cooperative are the nations of the world. Eighty-five countries are full members, while three territories which are not responsible for the conduct of their international relations have been admitted as associate members.

Membership in WHO is open to all states.

All members contribute each year to WHO's budget, and all members are entitled to the services and aid provided by the organization.

WHO's Constitution

WHO's constitution, adopted by the International Health Conference in New York in 1946, embodies a new approach to world health.

It defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

It states that the enjoyment of the highest attainable standard of health is a fundamental human right.

It declares that governments have a responsibility for their people's health.

It says that unequal health development in different countries is a common danger and that the

health achievements of any state are of value to all.

It asserts that the health of all peoples is fundamental to the attainment of peace and security.

The World Health Assembly and the Executive Board

Each year, WHO's member states send their representatives to the World Health Assembly which reviews current activities and decides:

The policies that govern WHO's work.

The programme to be undertaken in the next and succeeding years.

The amount of the budget necessary to carry out the programme for the following year.

The Assembly is also attended by observers from international bodies and medical and technical associations connected with health work. The Eleventh World Health Assembly met in Minneapolis (Minn.) on 28 May 1958.

All member countries have an equal standing and equal voting rights in the Assembly. This ensures that WHO's activities shall be those which best serve the interests of its members.

Each year the Assembly elects six countries entitled to designate a person to serve on WHO's Executive Board.

The Executive Board is a technical, non-political group of 18 health experts, each designated by one of the countries elected for the purpose by the World Health Assembly. Six board members retire each year.

The Executive Board gives effect to the decisions of the Health Assembly, and scrutinizes the programme and budget proposed by the Director-General before its presentation to the Assembly. It generally meets twice yearly.

Current Chairman: Sir John Charles, Chief Medical Officer, Ministry of Health, United Kingdom.

WHO'S Six Regions

WHO's constitution recognizes the desirability of decentralizing WHO's activities, and provides for regional organizations to be set up to meet the special health needs of a given area.

WHO has therefore divided the world into six regions, each with its regional committee and regional office. They are: the Americas (office: the Pan American Sanitary Bureau in Washington, D. C.); Europe (office in Copenhagen, Denmark); Eastern Mediterranean (office in Alexandria, Egypt); Africa south of the Sahara (office in Brazzaville, French Equatorial Africa); South-East Asia (office in New Delhi, India); and the Western Pacific (office in Manila, Philippines).

The regional committees, each composed of all the WHO member states in the region, meet each year to plan health cooperation on the regional level and to consider what health programmes can render the most effective assistance to the countries of the region. The programme suggestions, after being endorsed by the regional committee, are sent on to WHO's Geneva headquarters where they are welded into a world programme to be presented to the World Health Assembly for final approval.

The administrative organ of the regional committee is the regional office which is also responsible for carrying out WHO's programmes in the region. Thus the regional machinery enables WHO's activities to be adapted to the evolving health needs of individual countries in each region.

The Director-General and the Secretariat

The World Health Assembly appoints the Director-General, who, subject to the authority of the Executive Board, is the chief technical and administrative officer of the organization. The Director-General appoints the staff of the secretariat (at present about 1000 all over the world). At the head of each regional office is a regional director, appointed by the Executive Board in agreement with the regional committee.

Expert Committees

To ensure that the organization has the best possible advice when drawing up its policies and programmes, it has appointed over 1000 of the world's leading health authorities and medical scientists to serve on more than 30 expert panels, each covering a major field of health activity. As need arises, members of these panels may be invited to attend meetings of expert committees or study groups which formulate recommendations and proposals on specific aspects of WHO's programmes, and keep the organization in step with current medical and scientific advances.

WHO's Budget

When the World Health Assembly has approved the programme for a given year, it then decides the amount of money needed to carry it out. This annual budget (\$13,500,000 for 1958) is then contributed by *all* of WHO's member states according to a fixed "Scale of Assessment."

In this way the largest contributor, USA, pays in 1958 \$4,666,480, while over a dozen of the smallest member states pay each the minimum contribution which, for 1958, is \$5,760.

In addition to this budget, contributed directly by member states, WHO receives a certain sum from the United Nations Technical Assistance Fund. This fund is composed of voluntary contri-

butions made by a number of countries in addition to their regular contributions to the budgets of the United Nations or the Agencies, and is intended to promote the economic development of under-developed countries.

As it is now an accepted truth that health and prosperity go hand-in-hand, a portion of this technical assistance money is handed over to the World Health Organization to enable it to undertake additional health projects in countries where special need exists. The amount varies from year to year, but it is generally around five million dollars.

WHO and the United Nations

The World Health Organization is a specialized agency of the United Nations. This means that it was brought into being by the United Nations and is inspired by the principles laid down in the UN Charter.

When it came into official existence, however, it took on a large measure of independence: it has its own independent membership, its own governing body (the World Health Assembly) and its own independent budget.

WHO reports each year to the UN Economic and Social Council, and, through various coordinating bodies, its activities are linked with those of the United Nations and the other UN Agencies wherever their fields of interest touch WHO's.

WHO's Member States

Afghanistan, Albania, Argentina, Australia, Austria.

Belgium, Bolivia, Brazil, Bulgaria, Burma, Byelorussian S. S. R.

Cambodia, Canada, Ceylon, Chile, China, Costa Rica, Cuba, Czechoslovakia.

Denmark, Dominican Republic.

Ecuador, Egypt, El Salvador, Ethiopia.

Finland, France.

German Federal Republic, Ghana, Greece, Guatemala.

Haiti, Honduras, Hungary.

Iceland, India, Iran, Iraq, Ireland, Israel, Italy, Indonesia.

Japan, Jordan (Hashemite Kingdom of).

Laos, Lebanon, Liberia, Libya, Luxembourg.

Mexico, Monaco, Morocco.

Nepal, Nigeria, Netherlands, New Zealand, Nicaragua, Norway.

Pakistan, Panama, Paraguay, Peru, Philippine Republic, Poland, Portugal.

Federation of Rhodesia and Nyasaland, Romania.

Saudi Arabia, Sierra Leone, South Korea, Spain, Sudan, Sweden, Switzerland, Syria.

Thailand, Tunisia, Turkey.

Ukrainian S. S. R., Union of South Africa, United Kingdom, United States, Uruguay, U. S. S. R.

Venezuela, Viet Nam.

Yemen, Yugoslavia.

Pastoral Counseling Service Set Up in Medical Center

—A medical center outpatient service for persons needing religious counseling has been described by two North Carolina ministers.

Richard K. Young, Th.D., and Benjamin S. Patrick, Th.M., Winston-Salem, reported on the outpatient pastoral counseling service at North Carolina Baptist Hospital in the September 6 Journal of the American Medical Association.

It is one more example of the growing cooperation between medicine and religion in helping persons who are ill or who need help in solving their daily problems.

Outpatient counseling at North Carolina Baptist Hospital resulted from a program of intensive pastoral work with inpatients, the authors said. Many patients requested that the chaplain talk with members of their families. Many patients themselves returned for counseling after their discharge from the hospital, and eventually local pastors began sending their patients to the hospital chaplain.

In 1953 a program of outpatient counseling was set up. In that year there were 1,621 visits. By 1957 the number had grown to 3,208, and people were coming to the service from three states.

The staff consists of 13 men, all ministers. Six are permanent members and seven are fellows or interns. "These counselors function in their roles of ministers—but ministers with special training and experience in understanding human behavior," the authors said.

They deal with persons having typical problems of adjustment and make no attempt to handle cases of mental illness. When such patients appear, they are referred to the psychiatric clinic. Often such referrals are more easily made by chaplain-counselors than by local pastors, the authors noted.

Many problems are brought to the clinic. More than a third of the persons seen last year received marital counseling and many received "growth counseling"—growth in self-understanding.

The department looks on counseling as a religious process in which the individual is helped to realize more nearly the full potentials of his own personality, they said.

The outstanding advantage of a pastoral counseling service in a medical center is the availability of medical resources. If patients need medical care, they are referred to the medical departments. The medical staff and the chaplains realize that both play a part in the comprehensive care of the patient.

Another advantage is that counselors can be trained within the framework of interprofessional relationships. The medical and religious groups work closely together, exchanging information and learning from each other.

A promising development that has grown out of the North Carolina program is the opportunity for research, they said. The hospital has employed a clinically trained minister to do research in pastoral care. As far as the authors know, this is the first time that a medical center has employed such a person.



MEDICAL CENTER NEWS

HEART ASSOCIATION PROVIDES FIVE GRANTS TO CENTER

Cardiovascular research grants have been awarded to five doctors of the Medical Center by the Alabama Heart Association. The grants were made possible by the contributions of thousands of Alabamians to the 1958 Heart Fund drive this year.

Receiving grants were:

Dr. W. Sterling Edwards, Jr., Department of Surgery, \$12,000, for "a project on organization of techniques of open heart surgery and further development of synthetic arterial grafts."

Dr. Champ Lyons, Professor of Surgery, \$10,000, for "equipment needed in new cardiovascular operating suite at Medical Center."

Dr. Lloyd L. Hefner, Department of Medicine, \$8,820, for a "project on further study of the vibratory characteristics of human body and movements, size and mural thickness of human heart, utilizing principles of sonar."

Dr. Rex Perkins, Department of Surgery, \$5,000, for "project on study of altered dynamics of acute mitral insufficiency."

Dr. Tinsley R. Harrison, Professor of Medicine, \$6,727, for "cardiovascular research," and \$7,091, a continuing grant for "work classification unit project."

MATTHEW McNULTY NAMED FELLOW OF HOSPITAL GROUP

Matthew F. McNulty, Jr., administrator of University Hospital and Hillman Clinic, was recently installed a Fellow of the American College of Hospital Administrators at a convocation in Chicago. Election to a fellowship represents the organization's highest honor, awarded in recognition of distinctive service.



Mr. McNulty came to the Medical Center in 1954. Prior to this time he was lecturer in Hospital Administration at Northwestern University, where he earned his Mas-

ter's degree in that field. While serving with the Veterans Administration Department of Medicine and Surgery from 1946 to 1954, he assisted in planning, organizing and opening three new 500-bed VA teaching hospitals in Chicago, Birmingham and Little Rock, Arkansas. He served in the U. S. Air Force from 1941 to 1946.

DR. I. ERNEST GONZALES JOINS MEDICAL CENTER STAFF

Dr. I. Ernest Gonzales has joined the Department of Pathology as a Research Fellow. Dr. Gonzales was born in Mexico City, and obtained his early schooling there at English and private schools. In 1941 he moved to Provo, Utah, where he attended Brigham Young University and received his B. S. and Master's degrees.



From 1944 to 1946 he served in the United States Army.

Turning once again to his formal education, he obtained his Ph. D. in

Anatomy from the University of Oklahoma in 1955. He has also just received his M. D. degree from the same institution. He was a Fellow of the American Heart Association, located at the Oklahoma Medical Research Foundation, doing research in atherosclerosis, and will continue his investigation along these lines while working toward his boards in pathology here at the Medical Center.

While in college in Utah, Dr. Gonzales met and married his wife, Olive Marie, and they have two children, John Michael, aged 13, and David, aged 11. Whenever possible, they vacation in Mexico where the doctor's father is an agricultural engineer in Chihuahua, and where most of his family lives.

SENIOR MEDICAL STUDENT HONORED

Joseph Marion Donald, Jr., senior medical student at the Medical College, represented the school at the Clinical Congress of the American College of Surgeons held in Chicago, October 6 to 10. Representatives from 37 medical colleges attended this

year's congress. Donald is a son of Dr. J. M. Donald, who is a Fellow of the American College of Surgeons, on the staff of the Medical Center, and former president of the Medical Association of the State of Alabama.

DRS. PIGMAN, KOCHAKIAN ATTEND VIENNA CONGRESS

Two scientists from the University of Alabama Medical Center attended the Fourth International Congress of Biochemistry in Vienna, Austria, September 1st to 6th. Dr. Charles D. Kochakian, Professor of Physiology, and Dr. Ward Pigman, Associate Professor of Biochemistry and Codirector of the Arthritis and Rheumatism Research Laboratory, described to the Congress the results of the work done at the Medical Center by them and their associates.

At the invitation of the director of the Congress, Dr. Kochakian acted as a discussion leader in the Symposia on Steroids and also presented a paper reviewing the metabolism of androgens by tissue enzymes. This area of investigation was initiated by Dr. Kochakian and he and his associates have contributed a great deal of information leading towards the elucidation of the mechanism of action of the hormones.

Dr. Pigman traveled as an official representative of the U. S. Navy, since for several years he has acted as a consultant and directed research at the Medical Center for the Office of Naval Research and the U. S. Army Medical Development Board, Dental Branches.

Both scientists will also visit other research centers in Switzerland, Italy and Germany and will lecture at a number of institutions.

CONFERENCE IS HELD ON RHEUMATIC DISEASE

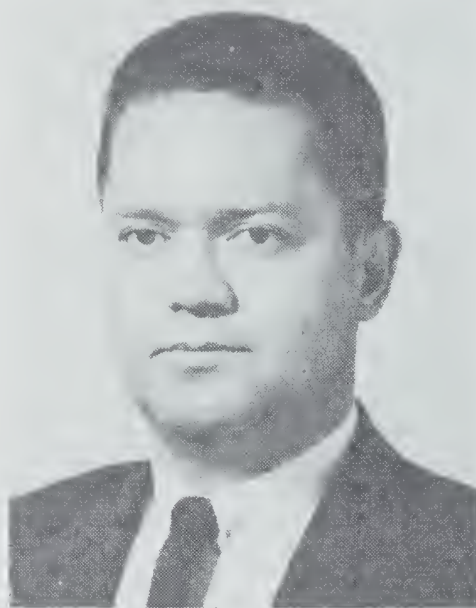
The Fourth Annual John R. Irby Rheumatic Disease Research Conference of the Medical Center was recently held at Ann Jordon Lodge, Alexander City, Alabama. Dr. Currier McEwen, Chief, Rheumatic Disease Service, New York University College of Medicine was guest moderator. The welcome was given by Dr. Robert C. Berson. Introductory remarks were made by Dr. Joseph F. Volker, Dean of the Dental College, and announcements were made by Dr. Howard L. Holley, Associate Professor of Medicine. Dr. Robert S. Hogan presided over the General Session and Dr. Ward

Pigman presided over the Basic Science Section. The Saturday evening session was presided over by Dr. Stephen L. Stigler, and introduction of the guest moderator was made by Dr. Walter B. Frommeyer, Jr., Professor and Chairman of the Department of Medicine.

About 40 individuals in the Arthritic and Rheumatic field engaged in presenting lectures and exchanging information in relation to the rheumatic diseases.

MR. CRANK NAMED PRESIDENT OF BIRMINGHAM HOSPITAL GROUP

James E. Crank, Assistant Administrator of the University Hospital, was recently elected president of the Birmingham Hospital Council.



Prior to his election to the presidency Mr. Crank held several offices with the hospital group. It is comprised of representatives from a number of hospitals in the Birmingham area and adjoining counties.

Mr. Crank came to the University Hospital from Atlanta, Georgia, where he was assistant to the Director of the State Department of Public Health. Prior to that time he was Field Representative of the Georgia Tuberculosis Association.

He is a graduate of the University of North Carolina and the Southeast Missouri State College.

PENNSYLVANIA MEETING HEARS DR. ROACH

Dr. Robert E. Roach, Director of the Hearing and Speech Clinic of the Medical Center, recently attended the annual convention of the Alexander Graham Bell Association for the Deaf in Pittsburgh, Pennsylvania.

He presented a paper entitled "Responsibilities and Training of the Audiologist in the Residential School for the Deaf."

Proceedings of the convention, including papers read, will be published in book form at a later date.

DR. HERON TO HOLD SESSION ON HYPNOSIS

Dr. William T. Heron, nationally recognized authority in the field of hypnosis, recently presented at the School of Dentistry a postgraduate refresher course in "Hypnosis Applied to Dentistry."

Dr. Heron holds A. B., M. A., and Ph. D. degrees and is Professor of Psychology at the University

of Minnesota at Minneapolis, Minnesota. His text, "Clinical Applications of Suggestion and Hypnosis," is widely used and his numerous articles are quoted in all literature on this subject.

The refresher course included lectures and clinical participation and afforded each participant the opportunity of inducing hypnosis. Surgical and operative procedures were performed by staff people on patients under hypnosis induced by course participants.

Dr. Arthur H. Wuehrmann, Associate Dean of the School of Dentistry, is the Director of the Refresher Course Program. He stated that the course has so many applications that a second course is in the process of being organized.

TENTATIVE PROGRAM

FIRST GENERAL MEDICAL PROGRAM* FOR ALUMNI AND FRIENDS OF THE ALABAMA MEDICAL CENTER BY THE CLINICAL FACULTY OF THE MEDICAL COLLEGE OF ALABAMA

Friday, November 28th and
Saturday, November 29th, 1958

Friday Morning

- 8:00-9:00 Registration (no fee).
Entrance—University Hospital Auditorium.
- 9:00-9:15 Official Welcome—President Frank A. Rose.
- 9:15-9:20 Seminars and Alumni—J. Henry Goode, M. D., President, Medical Alumni Association of Alabama.
- 9:20-9:30 Remarks—Vice President Robert C. Berson, M. D.
- Clinical Seminar**
- 9:30-10:30 Surgery:
Case Presentations,
Department of Surgery.
- 10:30-11:30 Obstetrics and Gynecology:
Selected Case Reports,
Josiah C. Carmichael, M. D.—Associate Professor of Obstetrics, W. N. Jones, M. D.—Professor of Obstetrics and Gynecology.
- 11:30-12:30 Psychiatry:
Cardiac Neurosis,
J. N. Sussex, M. D.—Associate Professor of Psychiatry.
Chronic Dependency, Its Reflection,
E. L. Caveny, M. D.—Professor of Psychiatry.
- 1:00-2:00 Luncheon—Complimentary—University Hospital Cafeteria.

Friday Afternoon

- 2:00-3:00 Medicine:
Recent Advances in the Therapy of Renal Failure, H. Victor Murdaugh, M. D.—Assistant Professor of Medicine.
Differential Diagnosis of Chest Pain,
Tinsley R. Harrison, M. D.—Professor of Medicine.

*All scientific sessions will be held in the University Hospital Auditorium

**This meeting has been classified for Category I credits by the Alabama Academy of General Practice.

3:00-4:00 Pediatrics:

Diagnosis of Congenital Heart Disease,
L. M. Barger, Jr., M. D.—Instructor in Pediatrics.

Saturday Morning

- 8:00-9:00 Medical and Surgical Conference.
- 9:00-11:00 Clinical Pathological Conference.

NATIONAL NURSE CONFERENCE ATTENDED BY DR. BERSON

Dr. Robert C. Berson recently participated in a national conference called by the Surgeon General of the U. S. Public Health Service. Also attending was Matthew McNulty, Jr., Administrator of University Hospital.

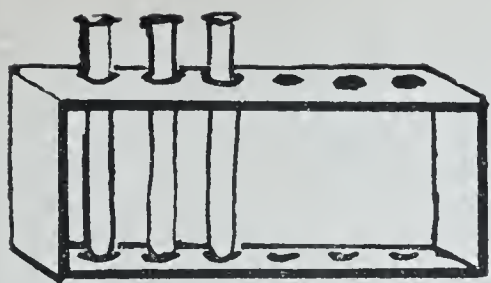
The conference was attended by 80 health authorities from throughout the nation who met to evaluate a federal program of scholarship aid for graduate nurses. This professional nurse traineeship program was inaugurated in August 1956, for a three-year period, to help meet an emergency need for nurses in teaching, administrative and supervisory positions.

A. M. A. Plans Civil Defense Conference in November

—More than 175 physicians and others interested in civil defense will gather November 8-9 in Chicago for the ninth annual County Medical Societies Civil Defense Conference. The two-day meeting at the Morrison Hotel, Chicago, is being planned by the AMA's Council on National Defense. Dr. F. J. L. Blasingame, executive vice president, will welcome the conferees on behalf of the American Medical Association, and Dr. Gunnar Gundersen, AMA president, will speak on "The Profession's Responsibilities in Civil Defense." Officials of the newly-created Office of Civil and Defense Mobilization will report on the expanding role of the federal government's defense program and the medical and health aspects of civil defense as they pertain to the new program.

As in past years, the group will divide up into workshop sessions to consider various phases of civil defense: organization and training; reception, evacuation and emergency care; hospital disaster planning; supplies, transportation and communication. In an effort to promote test operations dealing with simulated disasters, the program will feature reports on several field tests conducted this year. "Test Exercise Star"—based on a mock earthquake of severe intensity—was conducted by the Alameda-Contra Costa (California) Medical Association in cooperation with local civil and military authorities. "Operation Prep Pitt"—dealing with a theoretical jet airplane crash into the Pitt Fieldhouse—was conducted by the Allegheny County (Pennsylvania) Medical Society in cooperation with local authorities. "Operation AFTA"—based on a simulated airplane crash on the Tulane University campus—was sponsored by the Committee on Medical Education for National Defense (MEND) of the Tulane School of Medicine to provide a realistic situation for the instruction of medical students in the principles of disaster medicine.

ANNUAL MEETING
BIRMINGHAM
APRIL 9, 10, 11, 1959



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

ALABAMA'S DENTAL PUBLIC HEALTH PROGRAM

If the results of a survey conducted last year by the Division of Dental Hygiene, State Health Department, hold true for the state as a whole, over 75 per cent of Alabama's children between the ages of six and 14 have dental caries. The survey, which was conducted on a random sample of school children in eight counties, was undertaken as part of an effort to determine what the scope and form of a dental public health program in Alabama should be.

That such a program is badly needed has long been known to the State Health Department. There is little question that dental disease is epidemic in the state. In addition to caries, the dental diseases include such conditions as periodontal disease, malocclusion, oral cancer, and cleft palate among the adult as well as the child population. The extent to which these conditions are present is not known, but their incidence is believed to be wide.

Although some county health departments, in cooperation with local dental societies and civic organizations, have offered clinical services to some who are financially unable to purchase dental care, there has not been an extensive dental program at the state level in recent years. Activities on the part of the State Department of Health have been limited because of a lack of funds and the difficulty in obtaining the services of a person qualified to direct a program of the scope known to be necessary.

In January 1957 a director for the Division of Dental Hygiene joined the State Health Department staff. In the same year, the Legislature, during the regular session, appropriated funds to the Department for a dental health program. The appropriation was \$25,000 for the 1957-58 fiscal year and \$50,000 for the succeeding year. Full operation of the program was delayed, however, while the director attended a school of public health. With his return in June of this year, planning for full-scale operation began. Program planning and execution are done with the help of a Committee on Dental Health, an advisory body appointed by the Alabama Dental Association.

Initially, the dental health program will be one of education in two areas. One area is the fostering of continuing dental education for the practicing dentists in the state, and the other is an intensive dental health education program for the public. Some miscellaneous service will also be offered. For example, the Division is now prepared to furnish filters for all x-ray machines used in the practice of dentistry in Alabama. Use of these filters will insure that patients receive no more radiation than is absolutely essential for the practitioner's purposes. The filters are available on request from the Division of Dental Hygiene.

Two projects for furthering dental education have already been set up. In cooperation with the Alabama Dental Association, the University of Alabama School of Dentistry, and the District Dental Societies, the Division of Dental Hygiene is sponsoring a series of regional dental conferences. The purpose of these conferences is to help practicing dentists increase their professional skills and thereby to give better service to their patients. Speakers at the conferences are to be staff members of the University School of Dentistry. Their topics cover a wide range and are all of direct concern to the practicing dentist.

In cooperation with the University School of Dentistry, the Division is offering ten scholarships to a two-day refresher course in Pedodontics for the General Practitioner. This course will be held in Birmingham March 14 and 15, 1959. Applications for the scholarships will be accepted from all dentists licensed to practice in Alabama and who are engaged in the general practice of dentistry. Forms for use in applying for the scholarships have been mailed to all dentists.

The two major objectives for the public health education program will be to motivate individuals to practice good oral hygiene and to seek dental care on a regular basis. The emphasis will be on the prevention of dental disease through the formation of these habits.

At first, most activities will be carried on through public schools. An oral hygienist will be responsible for this phase of the program. The exact nature of her activities will be largely determined by the demand for her services—that is, she will serve schools and communities in whatever way they think best.

Presently, it appears that the major part of her

time will be spent in actual classroom work. It appears, too, that she will be called on to participate in workshops and institutes for the purpose of helping teachers plan ways to incorporate dental health education into their teaching and to help them develop and procure necessary teaching materials. The development and distribution of such materials will also be undertaken.

This does not mean that the oral hygienist's services are limited to schools. Other groups may request and receive her help. She may help with in-service education of public health nurses. It is anticipated that she may be requested to make surveys designed to determine community needs, that she will be called on as a speaker, or asked to serve as a consultant in planning community dental health programs. She will work with groups in whatever way proves helpful to them. The reception with which the offer of her services has already met makes it obvious that one person will be unable to meet the demand. Additional personnel to work in the public health education program will be needed.

Undoubtedly, other phases of the dental health program will develop. There will probably be a need for research surveys to delimit the dental health problem. It may prove desirable to offer clinical services on a limited basis. Fluoridation of public water supplies will need promotion. The program will take the direction found necessary. Whatever direction it does take, the purpose will remain what the American Dental Association has suggested as the aim of the dental profession: "To establish, maintain and promote good dental health for all the people."

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS
1958

	July	Aug.	E.E.* Aug.
Typhoid and paratyphoid	4	10	10
Undulant fever	0	0	2
Meningitis	11	9	9
Scarlet fever	37	10	17
Whooping cough	11	13	53
Diphtheria	1	5	16
Tetanus	4	2	4
Tuberculosis	189	200	199
Tularemia	0	0	0
Amebic dysentery	1	5	2
Malaria	0	0	8
Influenza	3	30	45
Smallpox	0	0	0
Measles	140	65	55
Poliomyelitis	2	14	62
Encephalitis	2	4	1
Chickenpox	4	3	6
Typhus fever	3	1	3
Mumps	8	20	38
Cancer	510	473	406
Pellagra	0	1	1
Pneumonia	66	125	114
Syphilis	95	118	169
Chancroid	2	1	5
Gonorrhea	314	341	400
Rabies—Human cases	0	0	0
Positive animal heads	20	22	0

As reported by physicians and including deaths not reported as cases.
*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director
SPECIMENS EXAMINED

August 1958*

Examinations for diphtheria bacilli and Vincent's	80
Agglutination tests	705
Typhoid cultures (blood, feces and urine)	679
Brucella cultures	3
Examinations for malaria	64
Examinations for intestinal parasites	3,576
Darkfield examinations	5
Serologic tests for syphilis (blood and spinal fluid)	24,295
Examinations for gonococci	1,782
Examinations for tubercle bacilli	3,325
Examinations for Negri bodies (smears and animal inoculations)	213
Water examinations	2,973
Milk and dairy products examinations	4,314
Miscellaneous examinations	895
Total	42,909

*This includes 1,269 specimens examined in the Dothan Branch Laboratory during the month of July whose report was received too late to be included in the July report.



NEW RATES FOR MAILING SPECIMENS TO
PUBLIC HEALTH LABORATORIES

The new rates put into effect by the U. S. Post Office Department on August 1 for third class mail, which includes all mailing containers used for the collection and mailing of specimens to the Public Health Laboratories, are as follows:

- 3c for the first two ounces
- 1½c for each additional ounce
- Minimum for each container—6c

On this basis, the postage to be placed on containers supplied by the Public Health Laboratories is as follows:

One blood for serologic test in mailing tube and envelope	6c
Two bloods for serologic test in mailing tube and envelope	7½c
One or two slides (malaria or G. C.) in envelope	6c
One I. P. specimen in mailing container	7½c
One typhoid or enteric culture specimen in mailing container	9c
One diphtheria culture in mailing container	6c
One T. B. specimen in mailing container	9c
One stool specimen for P. V. A. examination, in 9" mailing container	10½c
One private water sample in 9" mailing container	19½c

After November 1, 1958, there will be a penalty of 5c added for each parcel not carrying sufficient postage.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

November 1958

No. 5

THE EFFECTS OF GENERAL ANESTHESIA ON THE CIRCULATION

DAVID A. DAVIS, M. D.

Chapel Hill, North Carolina

Many patients approach surgery with certain misgivings as to their ability to stand the anesthetic. Unless the patient has obvious cardiac disease, he usually receives a cursory examination with a stethoscope and sphygmomanometer and is assured that he is perfectly capable of undergoing the contemplated anesthesia and surgical procedure. It is in this group of patients that the incidence of cardiac arrest is highest. Recently, Howland et al.¹ reviewed a group of patients in whom cardiac arrest had occurred and showed that most of these patients were capable of undergoing subsequent anesthesia and surgery in a quite satisfactory manner. Why are these patients able to tolerate anesthesia a second time? Why did their hearts stop once but not again? Innumerable factors can be discussed and implicated, but the one factor which stands out above all others is the care of the anesthetist concerned with the patient. This is not a matter of anesthetic agents.

It is amazing that so little is known about the effects of anesthetic agents on the circulation. There are many reasons for this lack of knowledge. The principal ones are the lack of interest on the part of qualified investigators, the lack of investigative facilities in many operating rooms, the difficulty of carrying out well controlled studies, and the complacency of most anesthetists and surgeons. We have learned to anesthetize patients by techniques proven by past performance and we are indeed fortunate that most of our patients wake up. This is much more a matter of luck than an under-

standing of the physiologic derangements involved. We are far from understanding why anesthetic agents produce anesthesia. If we repeat a performance many times and patients survive, we begin to think that we are acting in the best interests of the patient. Survival of a patient is no index of efficiency. In most cases, patients live in spite of what we do to them in the guise of "Victory over Pain."

What, then, is known of the effects of anesthetic agents on circulation? How can we tell what anesthesia is doing to our patients? There is no one good method. The cardiovascular system is amazingly complex. The normal circulatory system is capable of withstanding a considerable strain; it may or may not show evidence of this strain. The usual methods available to the anesthetist are the estimation of the blood pressure and pulse rate. What does a normal blood pressure mean? It may indicate that everything is really all right; or it may mean that the patient is compensating to his or her utmost and can barely maintain a normal blood pressure. With the least stress imaginable—simply moving the patient to or from the operating table—compensation may break and profound shock or cardiac arrest may become apparent. Likewise, the pulse rate may be a very poor index of the state of the circulation. We are taught that in times of circulatory stress the pulse rate increases. This may or may not be true, and whether or not tachycardia occurs depends on the ability of the heart to increase its rate. A badly damaged myocardium may barely be able to maintain a normal pulse rate. Counting the pulse and finding its rate normal may mean that the heart is doing all it can under the circumstances and simply cannot respond to stress by increasing its rate.

Within the past few months the market has been flooded with so-called cardiac monitors, claimed

Read before the Association in annual session, Montgomery, April 17, 1958.

The author is Professor of Surgery (Anesthesiology), University of North Carolina School of Medicine.

1. Howland, W. S.; Hanks, E. C.; Boyan, C. P., and Papper, E. M.: Reoperation after Resuscitation from Cardiac Arrest, Surg., Gynec. & Obst. 106: 207-215, Feb. 1958.

to be able to foresee cardiac arrest. No claims could be more false. Most of these gadgets are simply transistORIZED amplifiers which translate the R wave of the electrocardiogram into an audible or visible signal. Other more elaborate monitoring systems display the electrocardiogram on a screen but how many anesthetists or surgeons are able to predict cardiac catastrophe on the basis of the electrocardiogram or the sound of an R wave?

Having few dependable methods of estimating the damage we do to the circulatory system when we anesthetize patients, what do we know? Fortunately we do know a few simple facts which, if considered in every patient, may reduce the incidence of cardiac arrest. In the first place, all drugs which we use for preoperative sedation or for anesthesia are circulatory depressants. We never help the circulatory system by putting patients to sleep. The deeper we anesthetize patients the greater is the stress on circulation. All general anesthetics are circulatory depressants. The more rapidly we produce deep anesthesia the more profound the circulatory depression. There are few if any exceptions to the above simple rules.

What then are the effects of different agents? In modern anesthesia, induction with a barbiturate is common practice because it is more pleasant for the patient and often is used as a means of speeding up the operation. Yet if looked for, every patient anesthetized with "ultra-short-acting barbiturates" will show circulatory depression. Rapid induction is an extremely vicious practice. The saving of a few seconds is not worth the life of an occasional patient. This does not mean that barbiturates should not be used, but they must be given very slowly and only in amounts just necessary to produce sleep. There is no justification for the rapid administration of intravenous anesthetics, especially in the elderly patient. This may be quite dramatic but seldom does the patient benefit.

Similarly, the rapid induction of anesthesia by inhalation agents is of no benefit. Most, if not all of the inhalation anesthetic agents are myocardial depressants, and the maintenance of the appearance of normal circulation depends on the provocation of a rather intense sympatho-adrenal response. Lacking this response, circulatory catastrophe may occur. When experimental animals are anesthetized by the rapid administration of ether, there occurs a dramatic and abrupt fall in contractile force of the myocardium.² The blood pressure does not necessarily fall with this diminution in heart force. This is due to the fact that

ether provokes a marked sympatho-adrenal discharge, with an immediate rise in the blood levels of norepinephrine and epinephrine, a compensatory vasoconstriction and maintenance of blood pressure. This seems to be a fundamental mechanism in the maintenance of blood pressure in the anesthetized patient. When compensatory mechanisms are absent or are already strained to their fullest, then even very small concentrations of ether may produce profound circulatory collapse. This is seen clinically in the patient who is undergoing an extensive sympathectomy; who is in shock or bordering on shock; who is on therapy with cortisone, chlorpromazine, Rauwolfia or related drugs and in the postoperative state.

This last condition—circulatory collapse in the postoperative period after circulation has been maintained, apparently adequately, during operation—has been erroneously termed "cyclopropane shock." Postoperative hypotension, without tachycardia or evidence of vasoconstriction, may occur following any anesthetic agent and has been correlated with carbon dioxide retention and release by Dripps and others.³ Carbon dioxide is an excellent stimulant of sympatho-adrenal discharge. It is also an extremely rapid diffusible agent. It is, by direct action on peripheral vessels, a vasodilating agent. By direct action on the myocardium, carbon dioxide is a powerful circulatory depressant.⁴ With mild respiratory depression, carbon dioxide retention occurs, leading to maintenance of blood pressure by sympatho-adrenal discharge in the face of myocardial depression and vasodilation. When anesthesia is discontinued and carbon dioxide returns rapidly to normal levels in arterial blood, the stimulus for sympatho-adrenal discharge is present no longer and the patient is left with a depressed myocardium and peripheral vasodilation resulting in hypotension. Fortunately this situation soon corrects itself spontaneously and is seldom, if ever, fatal. But it is not beneficial, and its occurrence in the absence of excessive blood loss can be taken as an indication that the patient was not ventilated properly during anesthesia. Carbon dioxide is a very potent drug. It is used to provoke convulsive therapy in certain psychiatric disorders. These convulsions may be prevented by light anesthesia. It is quite clear that many patients, in spite of good intentions, are subjected to convulsive concentrations of carbon dioxide. Anesthetics and muscle relaxants simply prevent the convulsive movements, but they do not protect

2. Boniface, K. J.; Brown, J. M., and Kronen, P. S.: The Influence of Some Inhalation Anesthetic Agents on the Contractile Force of the Heart, *J. Pharmacol. and Exper. Therap.* 113: 64-71, Jan. 1955.

3. Dripps, R. D.: The Immediate Decrease in Blood Pressure Seen at the Conclusion of Cyclopropane Anesthesia: "Cyclopropane Shock," *Anesthesiology* 8: 15-35, Jan. 1947.

4. Boniface, K. J., and Brown, John M.: Effect of Carbon Dioxide Excess on Contractile Force of Heart, *In Situ*, *Am. J. Physiol.* 172: 752-756, March 1953.

the patients from the physiologic derangements which hypercapnia produces.

Hypoxia has not been mentioned. It is mentioned now only to note that its effects on circulation are so well known and so adverse as to make further reference to the subject unnecessary.

In summary, then, all anesthetic agents are cir-

culatory depressants. The fact that patients survive our assaults is due to the magnificent compensatory ability of the human body. If we use agents at our disposal wisely, slowly and cautiously keeping in mind the absolute necessity for adequate ventilation, cardiac arrest should become a rare occurrence.

THE LAWYER AND DOCTOR IN COURT

WALTER B. JONES

Montgomery, Alabama

I am grateful for the cherished privilege of appearing before you during your annual meeting. It is a high honor to speak to the members of an Association which, for more than three-quarters of a century, has ministered to the people of our State, to bring them health, strength and long life.

As you meet here this morning, in Alabama's State capital, a city associated with so much of the history of our State and Nation, let us not forget that it is to be forever remembered as the Cradle of the Southern Confederacy in 1861, and the poet has truly written of that government founded here that April day

No nation rose so white and fair,
None fell so pure of crime.

I am sure, too, that all of us recall the long line of distinguished physicians and surgeons who organized your Medical Association and who, through the years since then, have made it a strong and useful servant of the people of Alabama.

There are many wise decisions of the Supreme Court of Alabama, reported in the books, some 274 volumes of reported decisions from 1819 down to date, but I don't recall a wiser or sounder ruling than that made in the well known case of Parke vs. Bradley, State Treasurer of Alabama. You will recall that case, decided almost forty years ago by the late Mr. Justice Ormond Somerville, with Chief Justice John C. Anderson, and Associate Justices Thomas C. McClellan and William H. Thomas, speaking for the Alabama Supreme Court, involved the contention of Dr. Thomas D. Parke and others, a contention presented with unusual force and ability, not that the Legislature of Alabama was without authority to create a state board of health and empower it to administer the public health law, but the contention there made was that if the Legislature did create such a board, then

it must be a State board, an arm of the State government, and whose members must be State officials, chosen as such, and amenable to public control and supervision.

Boiled down to a simple statement, it was argued before the Supreme Court in 1920 that the State Board of Health, as constituted by the laws of Alabama since 1875, was an illegal body, and that the State Treasurer should be enjoined and prevented from making any payments from the State Treasury to the State Board of Health.

The act of the Legislature under attack in the Parke-Bradley case was that of February 19, 1875, which declared in brief that the Medical Association of the State of Alabama, as organized at Tuscaloosa in 1873, "be and is hereby constituted the Board of Health of the State of Alabama." Further on in this act, it was provided that county medical societies affiliated with the Medical Association of Alabama should be the boards of health for their respective counties and be under the general direction of the State Board of Health, that is the Medical Association of the State of Alabama.

The Supreme Court upheld the constitutionality of this law and held the Board of Health entitled to receive and within the law expend any money appropriated to it by the Legislature.

This was the last serious attack made in the courts against the Medical Association being and acting as the Board of Health of the State of Alabama. Should you sometime be interested in reading and studying this decision as one of the great events in the history of your Medical Association, you will find the Supreme Court opinion reported as Parke v. Bradley, 204 Ala. 455, and also in 86 So. 28, June 30, 1920.

You have already had warm and cordial welcome from high officials of the State, County and City, and perhaps don't need another welcome; but please permit me as the presiding judge of the Circuit Court of Montgomery County to welcome you here to Montgomery on behalf of the bench and bar of our county.

Read before the Association in annual session, Montgomery, April 18, 1958.

The author is Presiding Judge of the 15th Judicial Circuit.

While we have all sorts and kinds of remedies in our judicial medicine cabinet—habeas corpus (which an old darkey wisely defined as a quick way to get out of jail), certiorari, mandamus, coram nobis, and such like, I am sure you will not need any of these remedies. Seldom, if ever, do we have members of the medical profession as defendants in our criminal courts. Experience of nearly forty years on the State bench, and an association of ten years with the federal courts, teach me that the members of the medical profession are law-abiding. Doctors individually and as members of a great profession are not inclined to crime. Rather always they are as hand maidens to the administration of justice.

IMPORTANCE OF MY SUBJECT

In selecting, as the topic of my talk before you this morning, *The Doctor and the Lawyer in Court*, I have chosen an important subject. Both the legal and the medical professions have long realized the need for better understanding and cooperation.

I think each year the members of the two great professions "desire to think together not only upon technical matters but to think more broadly and philosophically" about the responsibility lawyers and doctors have to mankind.

Dr. Elkin, Emory University School of Medicine, well notes:

"A more intelligent use of medical libraries and research materials by the lawyer and a better understanding by the physician as to the part he is to play in the courtroom result from our joint enterprises of working and studying together."

One of the big problems confronting our professions is that of securing impartial medical testimony, especially in litigation involving injuries to the person. Any one who has seen the trial of a personal injury suit in our courts must confess that there are serious deficiencies prevailing in the placing of medical proof before the triers of fact in judicial proceedings.

Personal injury cases constitute the bulk of litigation in the trial courts of the country, and it is a reasonable estimate that 80 per cent of the cases tried before juries are personal injury cases which require the taking of medical testimony. A large part of the time of courts and juries which is consumed in the trial of personal injury cases is devoted to ascertaining, after the essential fact of fault and legal liability is established, two things: (1) the nature of the injury, and (2) the extent of the injury.

"In personal injury cases, there are two central issues: liability and damages. On the question of liability, which boils down to a determination of where fault lies, juries and judges are generally capable of making a decision without the help of

outside experts. On the question of damages, however, they lack essential knowledge. Their job is to award to the plaintiff (assuming that they find in his favor on the question of liability) an amount of money sufficient to compensate him for the cost of medical care, loss of earnings, and pain and suffering occasioned by the defendant's wrongful act. In order to begin to compute these items—past, present, and future—they must know the nature and extent of the plaintiff's injury, its causal connection with the defendant's act, its probable duration, and its cure, if any. Diagnosis and prognosis are required, and thus the help of doctors becomes essential." (See "Impartial Medical Testimony," p. 6.)

It is not possible to stress the importance of medical testimony to practitioners, students and teachers of both the legal and medical professions. Medical testimony, properly presented, is important in a large percentage of litigation, as in actions on insurance policies, malpractice cases, probate proceedings involving the soundness of mind of people who make wills, of people who are claimed to be non compos mentis and in need of a legal guardian. Then, too, where a defendant is charged with crime and claims he was insane when he committed the crime, medical testimony is essential. And I might mention in passing that I have seldom seen insanity proved as a defense to crime. It is a defense greatly abused and seldom offered in good faith. Most of the testimony offered to prove insanity is without any reasonable relation to the issue being investigated.

In countless sorts of cases the physical or mental condition of any of the parties to the lawsuit may be in issue, and here truly is needed impartial medical testimony.

When the trial of a personal injury damage suit is before a court and jury, and the same is true of any other case, we are trying to do what: to prove that the plaintiff is right in his claims? To prove that the defendant is justified in the defenses he is offering? To prove that one or the other of the parties litigant should prevail and have damages or walk out of the court room freed from any liability?

No, the real answer does not lie in the answer to any of the questions suggested above. We must never forget that there are at least three sides to every question (sometimes more)—there is your side of the question, there's my side of the question, and over and above all there is *the right side of the question*. So, in personal injury damage suits we are trying to determine from all the evidence brought before the court and the jury, as that evidence is to be measured and weighed under well established rules of law, what is the just thing, the fair thing, the right thing to do under the facts

of the case and the applicable law. When we do this, we have done justice between the parties, and that is the great object and end of all government. As Disraeli once said, *Justice is truth in action*.

And, while speaking here of courts and juries, may I digress to say that the system of trial by jury we have in America is one of the most useful institutions in the land.

I always recall what Lord Brougham wrote in 1828 on the subject of juries:

"In my mind, he was guilty of no error, he was chargeable with no exaggeration, he was betrayed by his fancy into no metaphor, who once said that all we see about us, Kings, lords and Commons, the whole machinery of the State, all the apparatus of the system, and its varied workings, end in simply bringing twelve good men into a box."

I hope we will never give up trial by jury, but wishing to preserve our liberties, and the democratic way of life, we will cling to the institution of trial by jury as the great Palladium of our freedom.

Now, as to what is being done in a practical way to help secure *Impartial Medical Testimony* in the courts, let me mention briefly a few of the better thought-out and worked-out plans. The Bar of the City of New York, collaborating with the judges of the trial courts in that city, have worked out what is called The Medical Expert Testimony Project. The idea behind it is to set up panels of neutral, outstanding physicians in various specialized branches of medicine, and these experts would be available at the call of the court to make medical examinations of plaintiffs in personal injury cases, and report their findings. They could be called on to testify in those personal injury cases where the medical aspects were controversial and substantial.

In 1940 the Minnesota State Medical and Minnesota State Bar Associations, responding to the growing concern for better medical testimony, appointed a committee on medical testimony to listen to grievances brought before them by both physicians and attorneys. In actual practice the plan has not amounted to much.

The plan which closely follows the New York Plan is the Baltimore Plan devised in 1950. The medical and legal professions seem to cooperate with the plan, but it would not be called a great success. As in the New York Plan, the doctor makes a report in triplicate and sends one to each lawyer and keeps one for his files. The doctor is paid by the side requesting his services, or his payment is left to the discretion of the court.

Then, there is still another impartial medical witness plan which is operated by the Los Angeles County Medical Association and the Los Angeles

Bar Association. The plan also uses a panel of physicians and surgeons to assist the courts in obtaining impartial testimony. The panel is selected by a joint committee of lawyers and doctors and has at least two physicians on the panel for each specialty. The court takes care of all arrangements and arranges for the doctor's fee to be paid by the party requesting his service. The plan was quite successful at first, but in recent years the courts have not used independent medical witnesses to a great extent.

A few states have what are called interprofessional codes between various medical and legal societies. In general, these codes "establish provisions relating to written reports to be furnished by the doctor; conferences between physician and attorney prior to trial; arrangements made in advance for the physician to testify; the conduct of a physician while on the witness stand; and the compensation a physician should obtain for testifying."

The most comprehensive of the interprofessional codes is that of the State of Wisconsin Medical Society and the Wisconsin State Bar Association, 1954.

So, with more and more legal and medical groups getting together to work out problems common to the two professions, and with the national organizations of the two professions, putting their heads together and giving much thought to this matter, better cooperation between the two groups is certainly resulting. The chief problem which confronts our profession in the future is the education of both bench and bar.

I am not familiar with what is being done in other counties of the State with reference to cooperation between doctors and lawyers but here in Montgomery County, in 1954, our County Bar Association and our County Medical Society agreed on this statement of principles:

"It is in the interest of the medical and legal professions that doctors and lawyers cooperate with each other in cases where medical testimony or information is necessary for the prosecution, defense, or handling of personal injury claims. The following statement of principles is proposed, in the interest of justice, and to insure the full cooperation of lawyers and doctors:

"1. In cases where a lawyer wishes to be informed as to a patient's treatment or condition, the doctor should be furnished authorization from the patient or his attorney. Where the medical examination is arranged for by a lawyer, written authorization is not necessary, but, if a copy of the report of findings is to be furnished opposing counsel by the examining doctor, the lawyer should notify the doctor in writing, otherwise the report or reports will be furnished only to counsel authorizing the examination.

"2. Doctors should promptly furnish written reports to authorized lawyers when requested. Written reports require time and effort, and when such reports are requested and furnished, it should be understood that the

doctor is to be paid by the patient for the making of such reports.

"3. In cases where the authorized lawyer wishes to have a conference with the doctor, a definite appointment should be arranged, at a time convenient to both the doctor and lawyer, and such appointment should be promptly met and kept to the end that both the lawyer's and doctor's time may be conserved, and with a minimum interruption of office routine.

"4. When a doctor is to be called as a witness, the doctor should be contacted by the lawyer well in advance of trial so that the doctor may be fully informed as to what the case is about and have an opportunity to review his records and arrange his schedule so that he may be available. Subpoenas should be issued at least a week prior to trial, and arrangements made by the doctor to be on a standby basis, subject to be called on short notice, during the trial. When cases are tried, opposing counsel should cooperate fully to the end that doctors may, when practicable, testify out of turn and their time be conserved.

"5. When a doctor has been subpoenaed or notified to appear in Court, and the case is settled, or is to be continued, the doctor should be notified immediately and released from his obligations to stand by.

"6. When the doctor appears in Court as a witness, it should be understood that he will render a statement for the time and services in connection with his appearance and testimony.

"7. Lawyers are not responsible for their client's medical bills, but lawyers will, if fully advised by the doctor, attempt to protect the doctor's claim for services and time."

Another step forward, this time contemplating the entire State, is the interprofessional statement of principles for attorneys and physicians in Alabama agreed upon at Birmingham, December 5, 1957, at a joint meeting of the Liaison Committees of the Alabama State Bar Association and the Medical Association of the State of Alabama. Each of these committees recommended the statement for adoption by the profession the committee represented.

This statement, in my judgment, is a good one and I believe that, if it is finally adopted by the professions, there will come a better understanding and cooperation between the professions:

INTERPROFESSIONAL STATEMENT OF PRINCIPLES FOR ATTORNEYS AND PHYSICIANS IN ALABAMA

PREAMBLE

Acknowledging that a substantial part of the practice of law and medicine is concerned with the problems of persons who are in need of the combined services of a lawyer and doctor; that the public interest and individual problems in these circumstances are best served only as a result of cooperative efforts of all concerned; that members of both the legal and medical professions share an obligation to the individual and to society, we, the Liaison Committees of the Alabama State Bar Association and the Medical Association of the State of Alabama, acting respectively on behalf of the Alabama State Bar Association and the Medical Association of the State of Alabama, do adopt and recommend the following declaration of principles as standards of conduct for attorneys and physicians in interrelated practice.

It should be emphasized that this Statement of Principles does not constitute legislation. It is the sincere hope of the Liaison Committees that the principles of conduct outlined will be observed and interprofessional relations be greatly improved thereby.

It is also recommended that committees be appointed by the Bar and by the Medical Society at the county level for the purpose of improving interprofessional relationship by the adoption and implementation of this Statement of Principles.

Medical Reports Requested by Attorneys

1. It is recognized that a physician is not required to give medical information concerning a patient except upon proper authority. It is recommended as proper that opposing counsel obtain and grant such authority when satisfied that information is sought in good faith for evaluation purposes.

2. When requesting such reports, the attorney should clearly specify the information desired, indicating whether or not it is to embody opinions regarding diagnosis, prognosis and disability evaluations.

3. Upon receipt of such request and authority, the physician should recognize its importance in furthering the ends of justice and furnish said report promptly and comprehensively.

4. It is not always possible for the physician to prepare a medical report on short notice, especially if it requires the complete examination of an unfamiliar patient or the perusal of any works of reference. The allowance of adequate time therefor permits the physician to provide a more comprehensive and satisfactory report.

Medical Testimony

1. The attorney and physician should confer prior to the physician being called to testify by said attorney in any legal proceedings, unless it is mutually agreed that such conference is unnecessary.

2. Such conference should be held at a time and place mutually convenient to the parties, and at which time the attorney and physician should fully disclose the matters concerning which the witness is to be interrogated and the testimony that will be given.

3. If an attorney plans to have a subpoena served on a physician, he should so notify him promptly, preferably in advance of service where circumstances permit.

4. Under no circumstances should an attorney seek or attempt to have the physician color or shape his expert testimony in such manner as to favor the interest represented by the attorney.

5. It is recognized that the administration of justice by the courts cannot depend upon the convenience of litigants, attorneys or witnesses, including physicians called to testify. Therefore:

- (a) The attorney should notify the physician as far in advance as possible as to when he is to be needed to testify, and keep him notified and advised as to any changes in this respect as they arise.
- (b) The physician should arrange to appear promptly when requested and do so unless prevented by circumstances which would constitute legal excuse.

6. The physician, while testifying should:

- (a) At all times maintain the dignity of his profession;

- (b) Answer questions as concisely and objectively as possible, using terminology, when permissible, which is understandable to a jury of laymen;
 - (c) If he does not know the answer to any question, so state and make no attempt to conjecture or theorize, or give answers not responsive to questions propounded or volunteered testimony;
 - (d) Under no circumstances permit any bias, prejudice, favoritism or personal interest to influence his testimony.
7. The attorney, in examining or cross-examining a physician, should:
- (a) Avoid questions which browbeat or badger the physician. Questions of this type are no doubt designed to discredit a witness' testimony by inciting emotional demonstration and are beneath the dignity of the ethical attorney and equally in violation of the dignity of the physician. No judge or presiding officer should tolerate these tactics but when they do arise and are not acted on promptly, the witness may address the court and inquire if he is required to submit to such treatment. Rarely will an administrator or judge fail to restore the hearing to its proper level if such a request is made.
 - (b) Prepare and propound all questions to the witness in such form and manner as will permit clear understanding and a forthright answer.
 - (c) Cooperate with the physician by minimizing, as far as practicable, the time required for the physician to remain in court.

Compensation for Services of Physicians in Litigation Matters

1. A physician is entitled to reasonable compensation for professional services rendered. The physician is within his rights in requiring that satisfactory arrangement be made for the payment of reasonable compensation for his services in furnishing any reports, attending conferences, performing examinations or rendering other professional services when requested by an attorney; but this right may be waived by the physician when, in his judgment, the person involved is unable to make payment.

2. While it is recognized that it is the statutory duty of the physician to testify under subpoena, it is not considered improper for him to be compensated for necessary loss of time on a reasonable basis with the consent of the litigant causing the subpoena to be issued.

Interprofessional Courtesy and Tolerance

It is recognized that both legal and medical professions are essential to society; and their aims are essentially parallel. This necessitates at all times full understanding and cooperation. Each has the duty to develop an enlightened and tolerant understanding of the other in the best interests of the public, as well as the reputations of the two professions.

So much for the wise principles which we seek to imbed in our interprofessional codes, all of these principles trying to help lawyers and doctors to think together and to place before the trial juries in our courts impartial medical testimony.

Perhaps a word or two as to the doctor's appearance in court will be helpful. It is the duty of the legal profession to explain to the doctor just the part he plays in the trial of a case, and the demeanor of the parties to the suit as well as the witness and the manner in which the medical testimony is presented have an important place in the trial. And the doctor should keep in mind the importance of the impression he makes on the jurors when he gives his testimony.

Jurors are human and, like all of us, we act more favorably to a congenial and pleasant witness and give more attention to his testimony. I find that jurors prefer a witness who looks into their faces as they sit in the jury box, and who makes them *the* important part of the proceeding. I find that too often the lawyer and the witness and the judge forget the fact that they, while a part of the trial machinery, do not have the importance which the twelve men sitting in the jury box have. The appearance of the witness on the witness stand, the attention he gives to the questions being asked him, and the direct way he answers these questions, all help to give a favorable impression. The doctor-witness should be unpretentious and courteous at all times. Some experts are poor witnesses because they are pompous in their actions and want to argue with the lawyer each question asked. While it is not always an easy matter to testify in terms which the laymen who sit on the jury can understand, yet it will be helpful if the doctor-witness can answer in language which can be understood by the jurors. It is always advisable to speak in the "layman's language," if this can be done, because most people, including jurors, do not understand common medical terms. When the doctor gets on the witness stand it would be helpful if he could forget all the medical terms and Latin descriptions and talk to the jurors in their own language. Some physicians on the witness stand have a tendency to speak indistinctly, too soft, or to turn away from the jurors when testifying. It is a good rule for the doctor to speak as though he were talking to a group at the rear of the courtroom, and you will notice that quite often the experienced, trial lawyer will get up from his seat at the counsel-table and move back so as to be beyond the last juror and then when the witness talks so the lawyer can hear he is also talking so the jurors can hear.

A doctor is a highly respected member of the community and jurors expect much from him. He should never act as if he is bored with his own testimony because, if he is, he will certainly bore the jury. In a minor way, a witness, testifying on the stand, is like an actor in a play. The audience, the jurors, must be kept interested. Whatever testimony should be given with assurance but not in a cocky manner.

These are just a few thoughts which occur to me and I know that those of you who have testified as witnesses in court have already followed these suggestions.

A very helpful book, one which is well-written and well thought out, is *The Doctor in Personal Injury Cases*, by Harold A. Liebenson, a Chicago trial lawyer. This little book of some one hundred twenty pages was published in 1956, and I find that many of our ablest and most experienced trial

lawyers in Alabama read and study it. If you do not have it in your library, I am sure its purchase would be a good investment.

In closing, let me express to you my appreciation of the kind and interested attention which you have given me, and let us, you and I, representing the medical and legal professions, do our part to help secure justice in the courts of our State by placing before our jurors intelligent and impartial medical testimony.

DIAGNOSIS AND TREATMENT OF INTRAORAL CANCER

PART I

JAMES W. HENDRICK, M. D.

Tuscaloosa, Alabama

This discussion of cancer of the oral cavity includes carcinoma of the mucous membrane of the gingiva, soft and hard palate, cheek, tongue, floor of the mouth, faucial pillars and tonsils. Benign and malignant tumors of the jaws and carcinoma of the lip have been discussed in previous communications.^{10,16}

Intraoral tumors are of clinical importance to the practitioner, dentist, otolaryngologist and other medical specialists. When a diagnosis is established early and adequate therapy is administered, including reconstructive surgery and the use of prosthetic appliances, conditions such as poor phonation, difficulty in swallowing, mastication and cosmetic disfigurement are eliminated.¹⁶

Treatment should be planned to destroy the tumor and institute such measures as are necessary to rehabilitate the patient. Justification for enlarging the scope of treatment to include resection of the superior maxilla and, in some patients, exenteration of the orbit, or radical neck dissection, hemimandibulectomy and hemiglossectomy is based on fundamental anatomic, pathologic, and biologic surgical principles.⁹

In most cases, with the exception of those cancers occurring in the center of the floor of the mouth or those involving the mucous membrane in the midline of the palate, the disease remains unilateral and rarely metastasizes bilaterally or extends below the clavicle until late in its course. This characteristic of this form of cancer permits the surgeon who is qualified in this phase of cancer management to extend every effort to eradicate the disease and rehabilitate the patient.

Read before the Association in annual session, Montgomery, April 17, 1958.

Part II will appear in the December Journal, as will the bibliography.

ETIOLOGIC FACTORS AND INCIDENCE

Clinical observations demonstrate a definite relationship between malignant disease of the oral cavity and oral sepsis; biochemical or physical trauma, i. e., ill fitting dentures, rough and ragged teeth or a rim of tartar around the gums; tobacco, especially snuff and chewing tobacco; syphilis, or benign lesions such as broad base papilloma and chronic leukoplakia.⁴ Adenocarcinoma, sarcoma and, occasionally, squamous cell carcinoma originate in aberrant salivary tissue.

Intraoral cancer accounts for approximately ten per cent of all human malignancy. The greatest incidence occurs between the ages of fifty and sixty years; and men are more frequently affected than women, in a ratio of five to one. This group of malignant diseases, because of their accessibility, should be diagnosed early and adequate treatment instituted; however, a large percentage of cases, when seen by the oncologist, are advanced. Each group of these cancers produces a different biologic and therapeutic problem depending on the location, blood supply and lymphatic spread. The early production of cervical metastasis, however, is one common factor consistently found. It is essential in planning a treatment program not only to eradicate the primary cancer but also direct attention to the lymphatic node drainage area.

LYMPHATIC SPREAD

Most intraoral cancers are disseminated by lymphatic emboli and not by the blood stream. A knowledge of the lymphatic drainage of the mucous membrane of the mouth is necessary for accurate examination for metastasis. A comprehensive study of the lymphatics has been discussed elsewhere¹⁶ and only a resumé will be given here. The lymphatics in the posterior area of the cheek drain into the parotid nodes; those from the an-

terior area drain into the submaxillary nodes and the nodes at the angle of the mandible. The deep lymphatics of the cheek drain into the facial nodes. The lymphatics from the lower gingiva unite into several chains, pass over the outer surface of the mandible opposite the last molar tooth, and enter the nodes in the submaxillary area. The lymphatics of the palate extend laterally with those of the upper gums to enter into several chains and pass backward to the superior constrictors of the pharynx to enter the deep cervical nodes along the internal jugular vein above the posterior belly of the digastric muscle. Some lymphatic pathways of the soft palate and nasal mucous membrane extend backward through the superior constrictors of the pharynx into the retropharyngeal lymph nodes. Others pass beneath the mucous membrane of the posterior pillars of the fauces to the deep cervical nodes. Metastasis to the lymph nodes in the drainage area of primary malignant disease of the soft and hard palate, upper gingiva and buccal mucous membrane occurs late, in most instances.

The lymphatics of the tongue, except the anterior tip, lower gingiva and floor of the mouth, pass through the periosteum of the mandible on their way to the lymph nodes in the submandibular area.⁷ Metastasis from the tonsils, floor of the mouth, tongue and lower gingiva occurs extensively and with great rapidity.

Simmons,¹⁴ reporting 387 cases of cancer of the buccal mucous membrane, states that 16 per cent had metastasis to the lymph node drainage area on admission. Martin and associates¹² report from the Memorial Hospital that 56 per cent of their patients had no palpable lymph nodes at the time of admission but that 51 per cent had metastasis at one time or another.

Ward and Hendrick,¹⁶ reporting from Johns Hopkins Hospital, have shown that Grade I squamous cell carcinomas of the palate, buccal mucous membrane of the cheek and upper gingiva metastasize late. The higher histologic grades of tumors, especially those of the buccal mucous membrane of the cheek and lower gingiva, had metastasis in 40 per cent of cases on admission. Fifty per cent of the cases of cancer of the tongue and floor of the mouth had palpable metastatic lymph nodes on admission. It has been noted by Ward and Hendrick¹⁷ that the mandible is involved early in carcinoma of the floor of the mouth and tongue. This fact must be recognized in the treatment of both the primary cancer and the lymph node drainage area.

PATHOLOGIC ANATOMY

Squamous cell carcinoma accounts for approximately 95 per cent of all intraoral cancers; these malignancies, as a group, begin as ulcers and later infiltrate the deeper structures. When they in-

volve the mucous membrane of the gingiva or soft or hard palate, they grow rather superficially at first, from one area to another. However, after a period of time they perforate and extend into the antrum, bones of the palate, gingiva or, when located near the angle of the mandible or maxilla, into the pterygoid fossa.⁸ Those located on the mucous membrane of the cheek frequently produce large verrucose polypoid-like tumors that are bulky and may practically fill the mouth. Fortunately, this type does not produce extensive infiltration or early metastasis. Frequently, a cancer involving the gingiva or hard palate may be obscured for an indefinite period by a denture and considered to be and treated as a trophic ulcer.

A review of the anatomy of the tongue shows that the anterior two-thirds, i.e., from the anterior tonsil pillar and circumvallate papillae forward, arises from the first and second branchial arches and is covered with ectoderm, whereas the posterior third arises from the third and fourth branchial arches and originates from entoderm.¹⁶ Cancers arising on the anterior two-thirds of the tongue, in most instances, are well differentiated squamous cell carcinomas, whereas those on the posterior third are more anaplastic, less well differentiated, metastasize early, and are more sensitive to irradiation. Adenocarcinomas originate in embryonic epithelium destined to form mucous or salivary glands and may be encountered in any location in the mouth where salivary tissue or mucous glands are found.

CLINICAL BEHAVIOR AND SYMPTOMS

Good visualization is essential for detection of early malignancy in the oral cavity. Any thickened or ulcerated area, with a soft or hard base, should be palpated with the gloved finger. A lesion in the mouth persisting over a period of three or four weeks should have biopsy; it is essential that adequate tissue representative of the tumor be taken, for the pathologist can only report on the specimen submitted for examination. In most instances, the gross appearance of the cancer permits a diagnosis.

Cancer occurring on the posterior third of the tongue or the occlusal line of the buccal mucous membrane is painful early due to infection and trauma; the associated induration prohibits the patient from masticating and swallowing normally. When a buccal cancer infiltrates the masseter, buccinator or pterygoid muscle, trismus results. Lesions occurring on the soft or hard palate and gingiva invade bone, which is demonstrated by roentgen examination.

TREATMENT

The poor hygienic condition of the mouth present in a substantial percentage of patients with

intraoral cancer must be corrected and infected teeth must be removed by a dentist; the remaining teeth are cleaned before therapy is begun. Warm saline mouth washes several times daily are beneficial.^{3,12} The method of treatment of intraoral cancer depends on the size, location, extent and histologic grade of the tumor, the age and general physical condition of the patient, and if there is clinical evidence of lymph node involvement.

Surgery, electrosurgery, irradiation, or a combination of these is used advantageously to treat most intraoral cancers. Adenocarcinomas, mixed salivary tissue tumors, and melanomas are radioresistant and should be surgically excised. Cancer located in areas with a good vascular bed can be eradicated better with radiant energy than those where bone or cartilage is present, as sufficient irradiation to eradicate the cancer frequently results in radio-osteonecrosis or a painful persistent ulcer.

Cancer of the Buccal Mucous Membrane. Cancers of the buccal mucous membrane, except the polypoid type, as a group, develop more rapidly, are more invasive, and metastasize earlier than those involving the soft or hard palate or upper gingiva. If neglected, these malignancies infiltrate into the buccal fat, the muscles of mastication or the pterygoid fossa of the cheek, which becomes perforated with a resulting fistula.

Small carcinomas involving the buccal mucous membrane under 2 cm. in diameter can be eradicated with thorough electrocoagulation or roentgen therapy. Four thousand roentgens, tumor dose, administered through an intraoral cone, will destroy the lesion and the tissues will remain soft and pliable permitting good function of the underlying muscles. If infection is present around the tumor and trismus does not permit the mouth to be opened sufficiently for introduction of an intraoral cone, extra-oral irradiation is administered through the skin and cheek. Superficial buccal carcinomas over 2 cm. in diameter are surgically excised and a split thickness graft is applied to cover the wound. A pressure dressing is applied over the grafted area which permits good healing and normal jaw junction.

Frequently lymph nodes in the drainage area are enlarged due either to infection or metastasis, or both. If enlargement results from infection, the nodes are adherent and usually tender; if enlargement results from metastasis, the nodes are hard and mobile and non-tender. When there is clinical evidence that the lymph nodes are involved by malignant disease, a radical neck dissection *en bloc* should be carried out after completion of irradiation.^{16,17}

Neglected buccal cancers perforate the cheek and skin and extend to the muscles of mastication,

lip or mandible and are best treated with aseptic oral hygiene, antibiotic and roentgen therapy. These patients may have oral fistulas when first observed due to perforation of the cheek by the malignant lesion. It is essential to remove the malignancy and reconstruct the oral cavity.⁵ In such cases the patient is fed through a plastic nasal tube which permits a daily intake of three to four thousand calories with adequate vitamins. The local lesion is treated with irradiation to sterilize the tumor. At the beginning of the administration of irradiation therapy, a pedicle skin flap is raised over the anterior chest wall; the lower end of the pedicle is made into the form of a pancake and lined with a split thickness graft. At the end of six weeks, following completion of roentgen therapy, the involved area of the cheek is widely excised with electrosurgery and any involved area of the skin, lip, maxilla or mandible is removed along with an *en bloc* neck dissection. Ligation of the external carotid artery prevents troublesome bleeding at operation or later. A properly fitting prosthesis permits wide removal of sections of either the maxilla or mandible with minimal facial disfigurement.^{7,8,9} The long tube pedicle graft is used to fill the defect in the cheek. The sulcus between the mandible and tongue is preserved, if possible, to give greater mobility to the tongue and permit swallowing and mastication to be carried out more easily.¹² By reconstructing these patients early, their morale is reestablished.

Ankylosis of the mandible was formerly a frequent occurrence when radium needles were utilized in the treatment of carcinoma of the buccal mucous membrane, tongue and floor of the mouth. The muscles of mastication became fibrosed and it was necessary, in such cases, to perform a tenotomy in three or four areas with a small tenotomy knife. In some cases in which the ankylosis may be pronounced, it is necessary to create a false joint by making an incision through the ascending ramus of the mandible with an osteotome.^{7,17}

Carcinoma of the Upper Gingiva, Soft and Hard Palate. Carcinomas under 2-3 cm. in diameter involving the mucous membrane of the upper gingiva, soft and/or hard palate, may be eradicated with thorough electrocoagulation giving a wide margin around and beneath the tumor, or with irradiation, 5000 roentgens tumor dose (Fig. 1). The lesion may be well localized with an illuminated del Regata localizer. A soft pliable scar results from either of these forms of therapy. Cancers on the posterior area of the upper gingiva or posterior area of the buccal mucous membrane are difficult to treat with irradiation using an intraoral cone and are most effectively treated with electrosurgery.

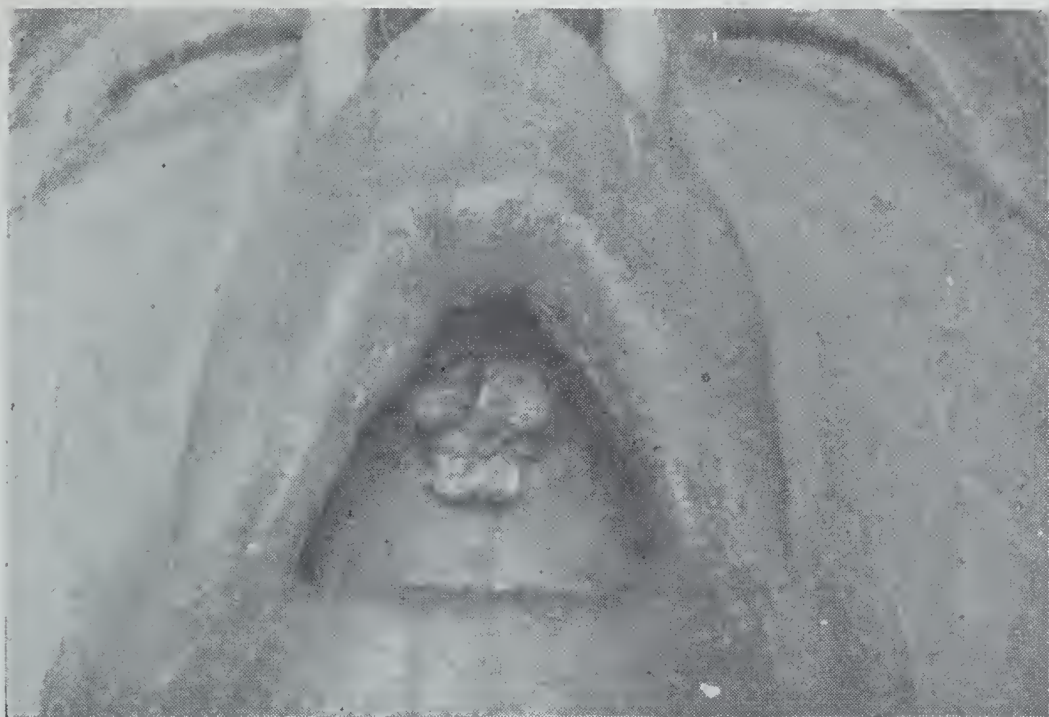


Fig. 1. Squamous cell carcinoma involving the mucous membrane of the hard palate treated with intraoral roentgen therapy with no recurrence in ten years.

Mixed tumors of salivary tissue origin frequently involve the soft palate.¹¹ Although it was formerly thought that salivary tissue tumors did not undergo malignant transformation, my observations have shown that approximately 40 per cent are malignant. In the past few months I have observed two patients with malignant salivary tissue tumors of the soft palate with metastasis to the lymph nodes at the angle of the mandible; the metastasis in the drainage area was observed in both before the intraoral tumors were discovered. Most mixed tumors of salivary tissue origin are excised with electrosurgery; if a defect results, the use of a prosthetic appliance permits the patient to take adequate food and converse normally, or the defect may be covered with a pedical flap consisting of the lateral third of the tongue. This does not interfere with normal mastication or conversation.

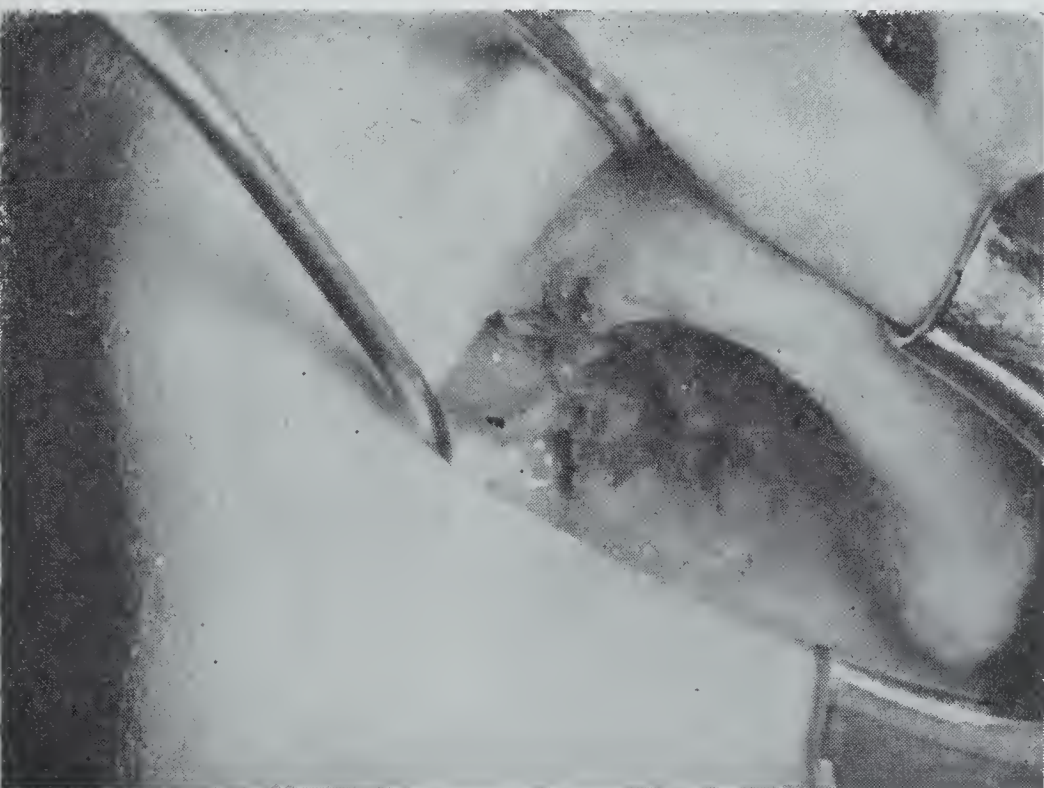


Fig. 2. An extensive squamous cell carcinoma involving the right half of the soft palate and extending onto the right upper gingiva which was treated with intraoral roentgen therapy, 4000 roentgens administered through an intraoral cone. Four weeks later, resection of the right superior maxilla was carried out.

Large carcinomas over 3 cm. in diameter involving the upper gingiva, soft and/or hard palate are treated with irradiation through an intraoral cone (Fig. 2). Daily treatments of 300-500 roentgens are administered to give a total of 4000 roentgens. From four to six weeks after the administration of roentgen therapy, the involved area is removed, including the superior maxilla and hard and soft palate. This technique has been utilized successfully for the past 12 years (Figs. 3, 4, and 5) and is applicable in the treatment of large squamous cell carcinomas, adenocarcinomas arising in mucous and mixed salivary tissue, osteomyelitis or radio-osteonecrosis of the paranasal sinuses. The occurrence of operative hemorrhage

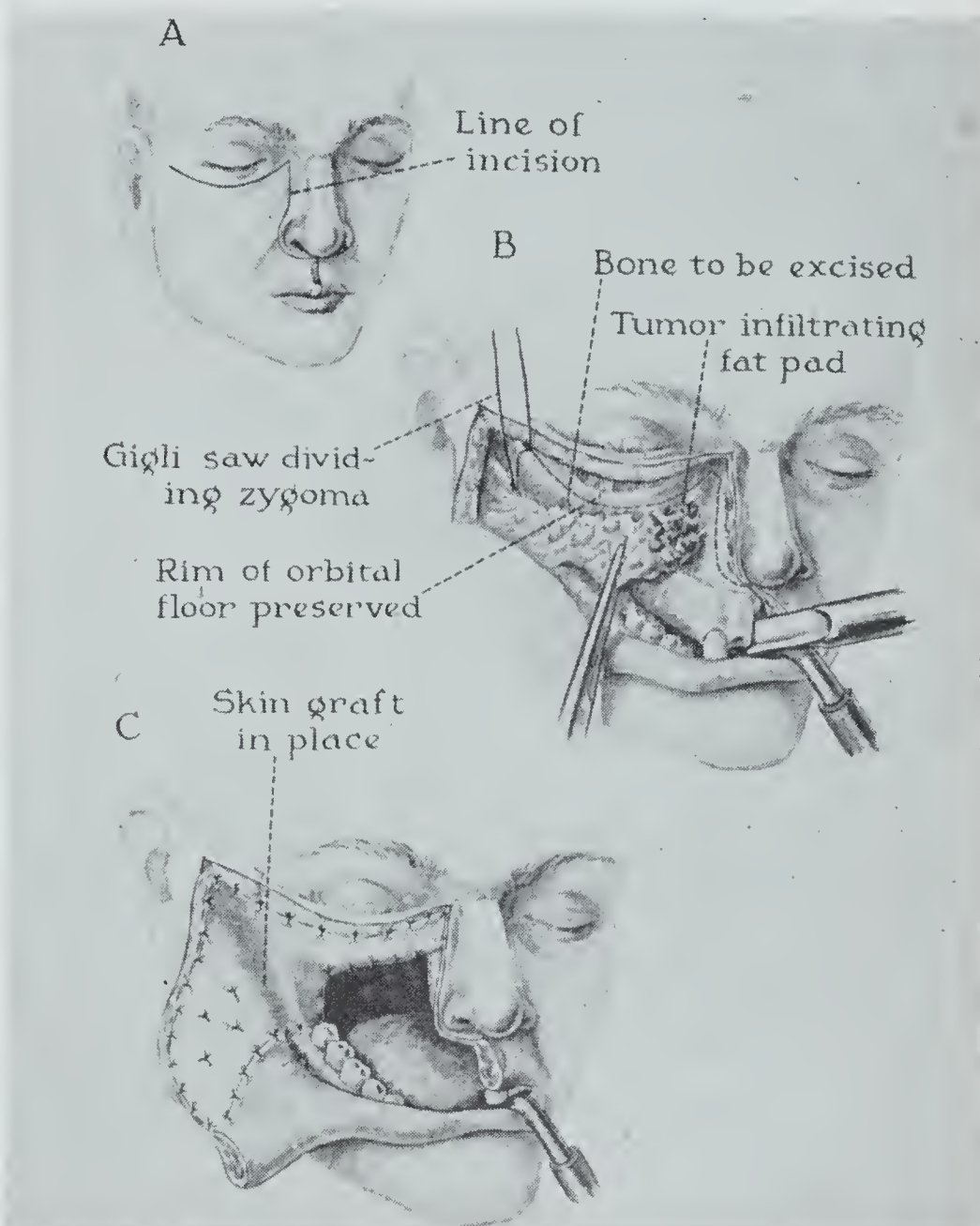


Fig. 3. Resection of the right maxilla in large cancers of the upper gingiva and soft and hard palate is performed with preservation of the orbital contents. A. An incision beginning in the midline of the lower lip is extended to the columella of the nose, into the right nasolabial sulcus to the inner canthus of the eye, following the infraorbital ridge laterally as far as necessary for proper exposure.

B. A hammer and chisel are used to mobilize the right superior maxilla; the zygoma is divided with a Gigli saw. The right superior maxilla is removed, preserving the rim of the orbital floor.

C. The raw surface of the cheek and periosteum of the bone are covered with a split thickness graft which is sutured in place with interrupted fine chromic catgut sutures.

(Fig. 3—A, B, and C—courtesy of Hendrick, Tumors of the Paranasal Sinuses in *Surgery, Gynecology and Obstetrics*.)

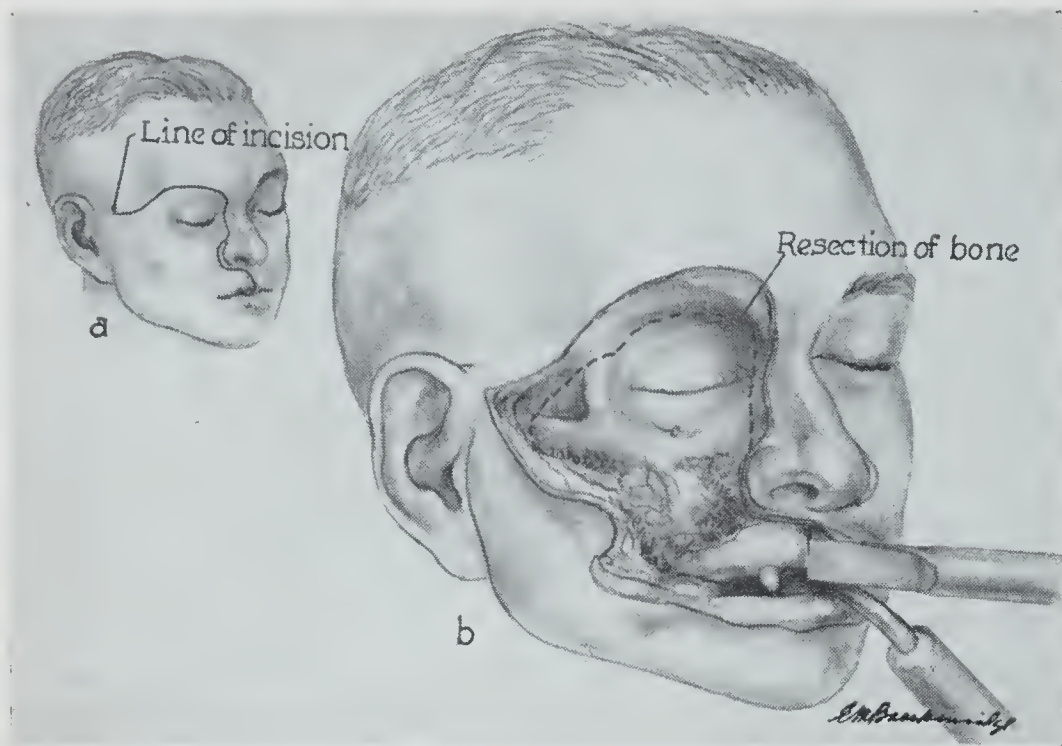


Fig. 4—A. The technique used when the tumor has involved the orbital contents.

B. The incision described in Fig. 3 is extended to the level of the eyebrow, laterally to the length desired for proper exposure. The right superior maxilla is removed, including the orbital contents and orbital floor.

(Fig. 4—A and B—courtesy of Hendrick, Tumors of the Paranasal Sinuses in *Surgery, Gynecology and Obstetrics*.)

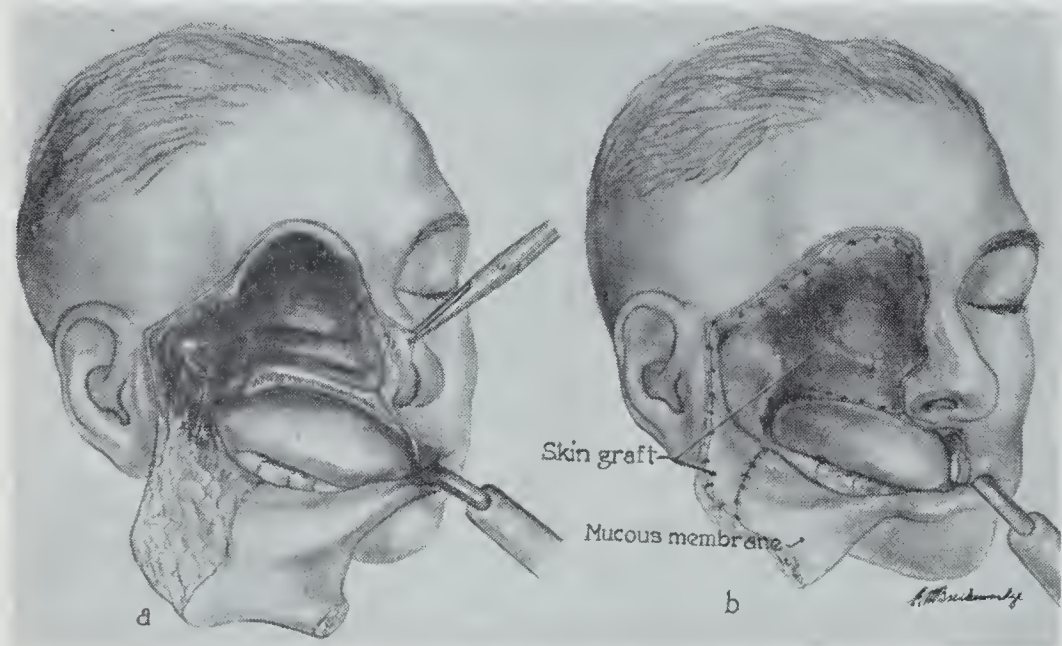


Fig. 5—A. The defect resulting from resection of the right superior maxilla and exenteration of the orbital contents.

B. The raw surface of the cheek and periosteum of the bone are covered with a split thickness skin graft sutured in place with interrupted fine chromic catgut sutures.

(Fig. 5—A and B—courtesy of Hendrick, Tumors of the Paranasal Sinuses in *Surgery, Gynecology and Obstetrics*.)

has been reduced to a minimum by preoperative ligation of the external carotid artery on the involved side.

Conditions, such as diplopia associated with sinking of the globe, rarely result from the use of this procedure; however, most patients have edema of the lower lid for a period of two to three months. Immediate skin graft has been used for a number of years to replace the mucous membrane lining of the cheek and antrum. A properly fitting prosthesis permits the patient to carry on normal activities with good cosmetic results (Figs. 6, 7 and 8).

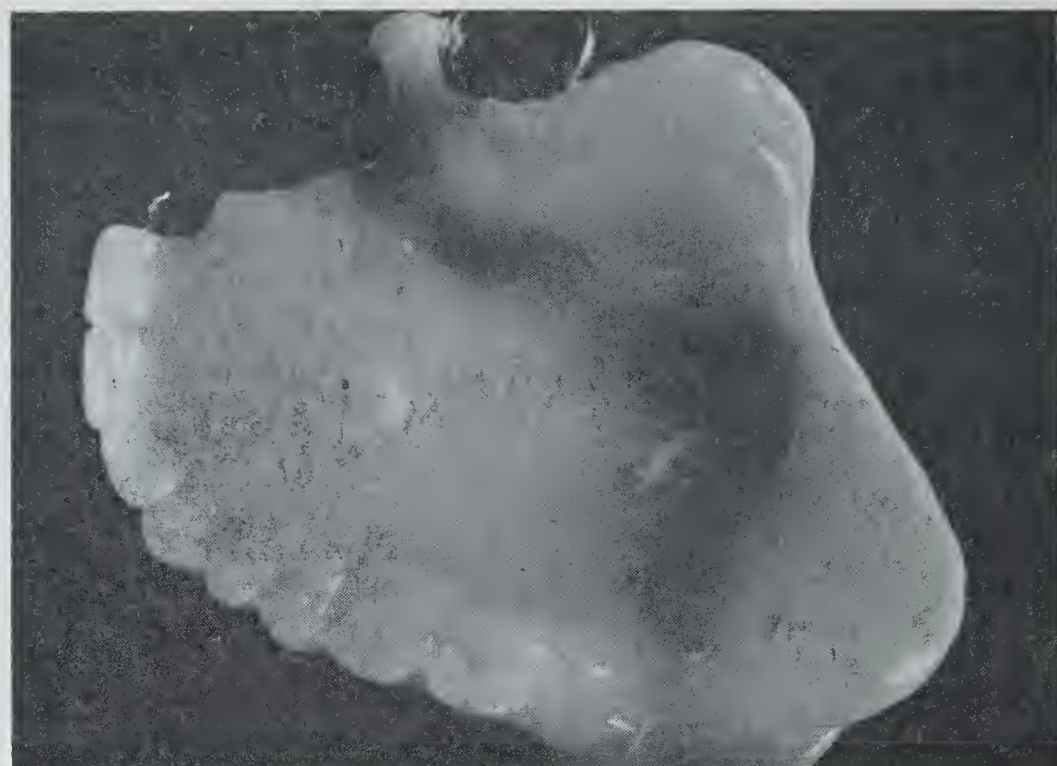


Fig. 6. A temporary prosthesis, prepared by a dental associate before operation, is placed in the mouth at completion of the operation, which permits the patient to eat, drink and phonate in a normal manner.

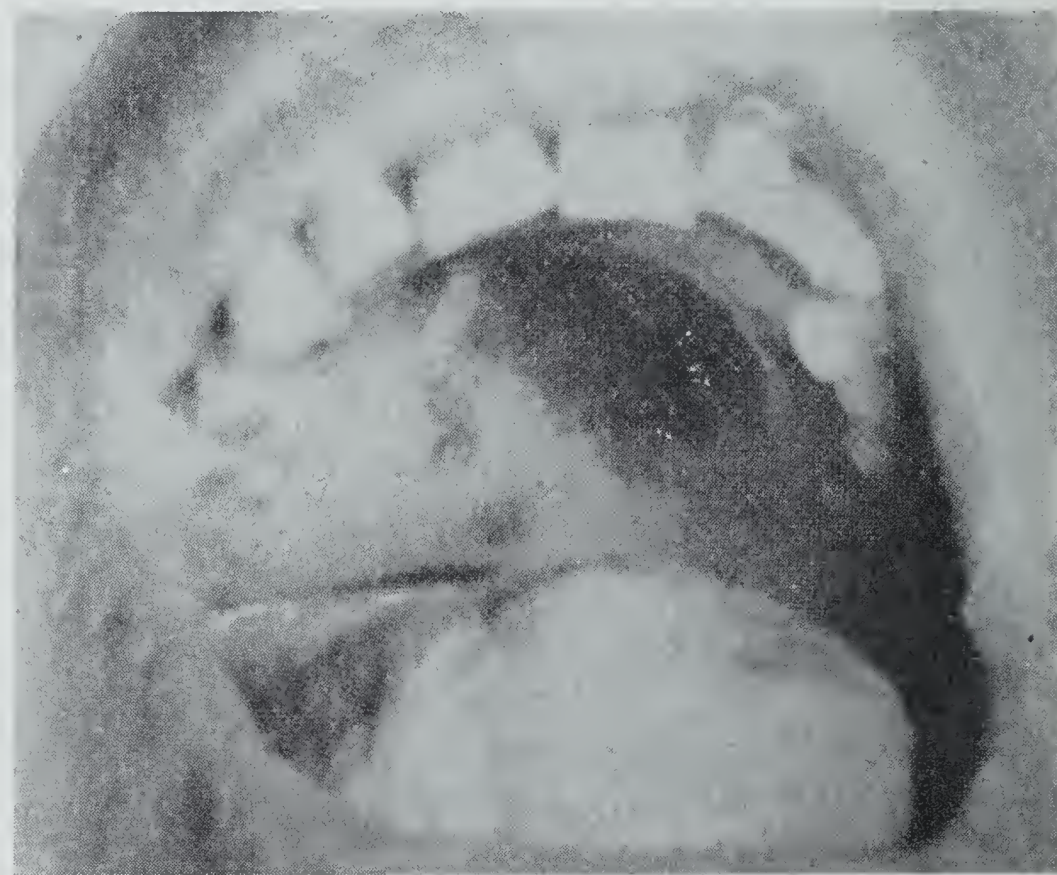


Fig. 7. The patient shown in Fig. 2, 48 hours following resection of the superior maxilla, with the prosthesis in place. The patient's mouth is wide open.

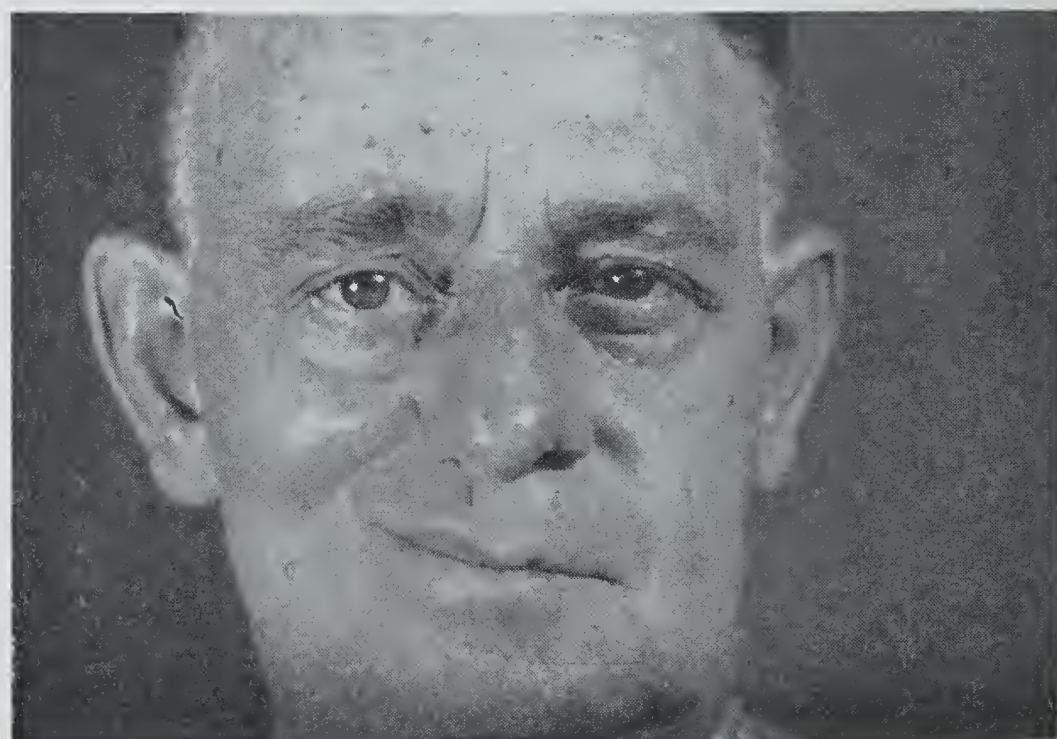
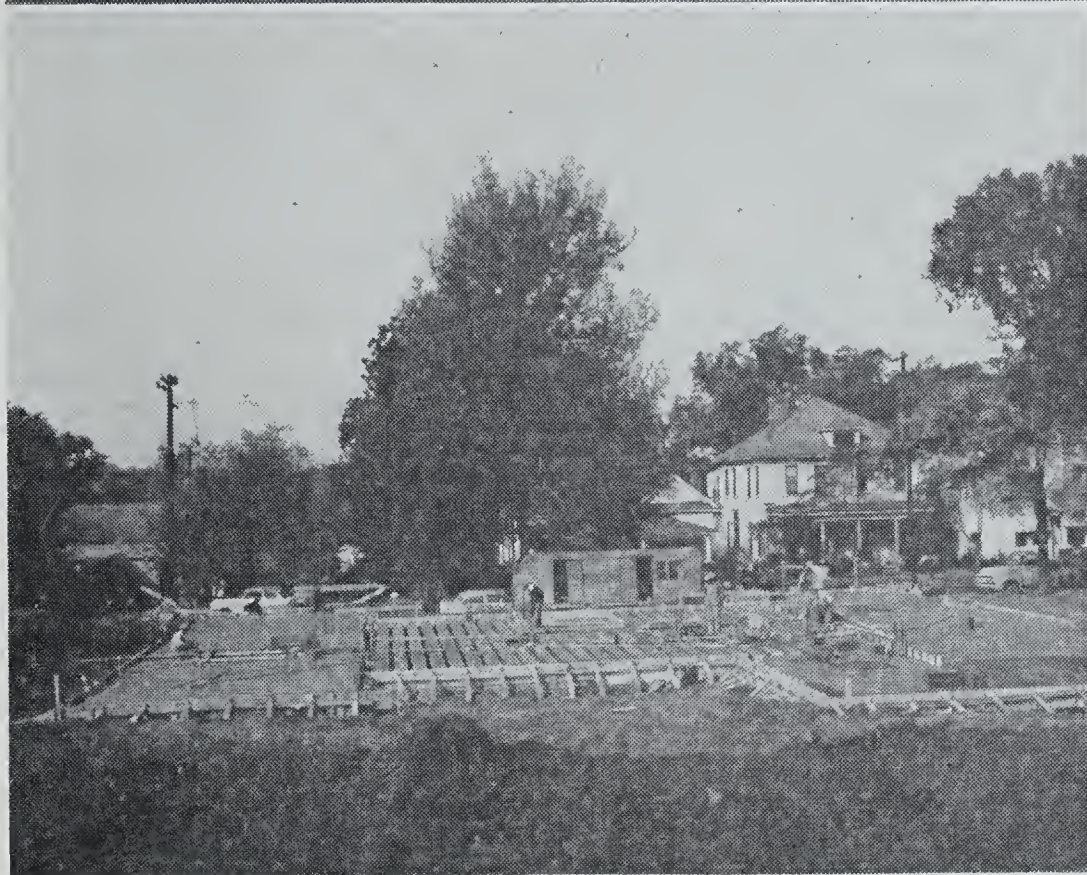
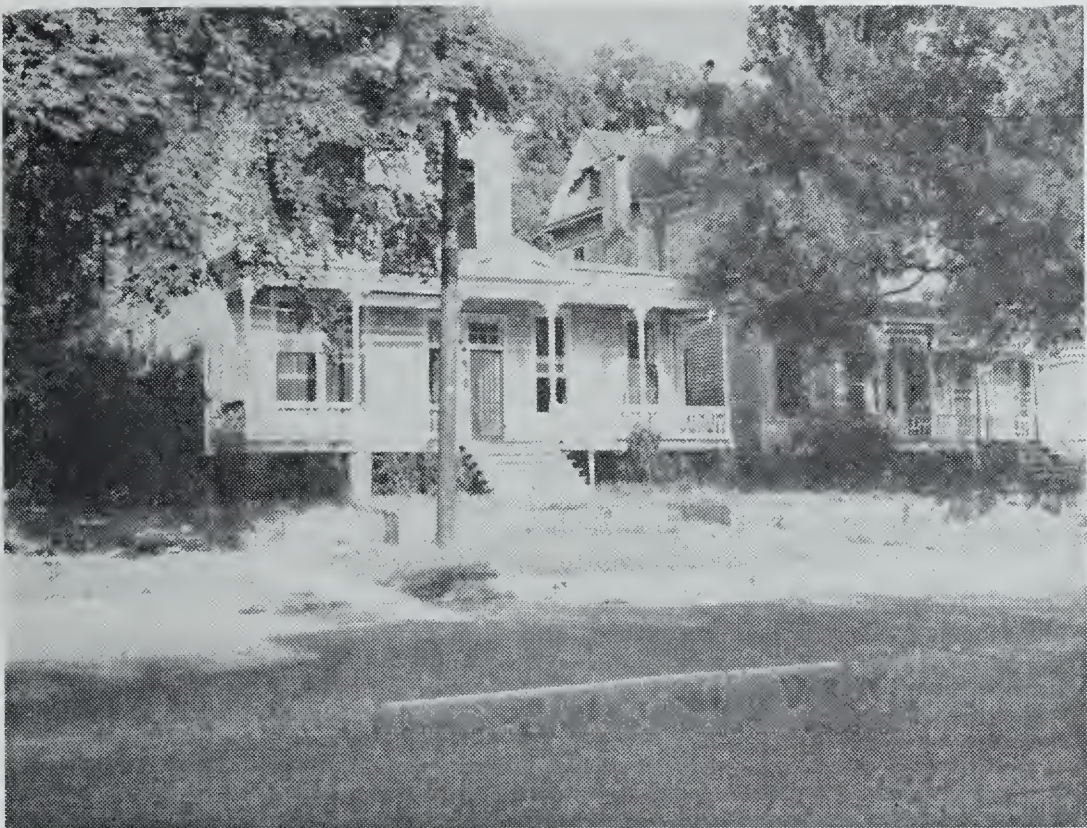


Fig. 8. A business executive, patient shown in Fig. 2, 12 years following resection of the superior maxilla for extensive squamous cell carcinoma of the right soft palate.



ORGANIZATION SECTION



PROGRESS REPORT—THE STATE ASSOCIATION'S HOME IS BECOMING A REALITY

At the April 1958 annual session of the Association, the acquisition of a home for the group was given a bright green light. Immediately thereafter, property of the dimensions 100' x 170' was acquired at Montgomery on South Jackson Street in the vicinity of St. Margaret's Hospital and a couple of blocks behind the state capitol building. Two frame dwellings occupied the site; and as soon as bids could be obtained, a demolition squad moved in. Buildings were dismantled, the lots leveled and preparations for construction begun.

Mr. Streeter Wiatt was chosen as architect, and preliminary plans were drafted and submitted in record time. Careful consideration was given to suggestions which were made by building commit-

tee members and members at large; final plans were approved; construction bids were invited. On September 9, the bids were opened and the contract awarded to C. F. Halstead, Contractor, who was low bidder. Mr. Halstead's crew moved in within ten days, and indications are that the state offices can be quartered in the new building in February 1959 as originally planned.

The story in photographs, from date of acquisition of the property to the date this issue goes to the printer, is shown above.

Upper left: The houses which encumbered the property when it was purchased. Upper right: Razing half completed. Lower left: Foundation of the entire structure (from rear). Lower right: A closer view of the foundation, showing in the foreground a workman in the area which will be the machine room at the rear of the building.



Editorials

THE PHYSICIAN'S ETHICS

GUEST EDITORIAL

J. O. Finney, M. D.

Gadsden, Alabama

In our frame of reference, ethics, a word derived from the Greek *ethos*, means the system or code of morals of a profession. Discourses on general ethics point out that the product of ethical practice, regardless of the discipline concerned, is the *summum bonum*, or highest good. The ultimate product of the ethical practice of medicine is the *summum bonum*, or highest good to the patient.

The code of morals of our profession was clearly delineated in that extraordinary document which bears the mark of Hippocrates. The morals and ideology expressed in this instrument were such as to set the physician apart from the tradesman.

The Hippocratic Oath binds one to realize his own limitations, to strive always for self improvement, and to share knowledge and experience with others practicing the art. There is no reference to specific programs of education. It is truly remarkable that such high ideals of conduct were set for the profession so many centuries before educational requirements, as we know them, were prescribed. With the almost unbelievable evolution in medical teaching, research and service, it is even more remarkable that the spirit of medicine has remained essentially unchanged for more than 2500 years. Vastly improved knowledge and techniques have but increased our effectiveness, while serving under the same banner which has flown since medicine was removed from the arena of superstition and established as a natural science, and its study and practice appreciated as an art. The game has changed; the rules of play remain unaltered. What a heritage! In his essay on Chauvinism in Medicine, Osler stated, "No other profession can boast of the same unbroken continuity of methods and ideals."

The formal declaration of ethics adopted by our profession in the United States is somewhat more lengthy than the Hippocratic Oath. However, the additions are little more than satellites serving to guard against breach of the original concepts.

Based on an address given by the author at the Association's 1958 Indoctrination Seminar.

Our code of morals requires of us a dedicated sense of responsibility: first, to the patient; second, to our colleagues; third, to the profession as a whole.

The Principles of Ethics adopted by the American Medical Association, on which is based the ethical code of our own Association, should be read and seriously reflected upon. The rules prescribed therein will serve well to guide you in your relationship with the patient and your fellow physicians, and inform you of your responsibility toward general activities of the profession.

In our age, a physician should have developed a proper sense of ethics by the time he graduates from medical school. Practice in a university hospital allows daily observation of proper ethics. In the class room, the operating room, on the wards and at the necropsy table there is an obvious striving for the best solution to any given problem. The patient is the axis around which turn the activities of teaching, research and service. Those responsible for the care of the patient readily admit their limitations and freely seek consultation from their colleagues with superior knowledge in certain areas. There exists a friendly spirit of give and take among those participating in rounds and conferences. Always evident is a desire to learn and to teach. Such an atmosphere indicates interphysician relationship of high order and is one in which the patient will receive the *summum bonum*. It is not unreasonable to expect ethics in private practice to approach that customary in teaching hospitals.

While a detailed consideration of our formal code of conduct cannot be engaged in, there are a few points deemed worthy of emphasis.

The purpose for which you have spent so many years in preparation is to serve the sick. Serve the patient as you would wish to be served.

Withhold judgment when a patient utters a derogatory remark about a colleague. Almost without fail, statements by a patient which tend to place another physician in a bad light result from

erroneous interpretation on the part of the patient and do not reflect the true situation. Be tolerant, for sooner or later a patient may incorrectly interpret your statement or action and carry a tale of woe to another physician.

Carefully consider that section of the Principles of Ethics devoted to the matter of payment for professional services. You will notice that split fees, rebates, kickbacks, discounts and the like constitute unethical practice. Such devices have long been declared as improper acts in relationships between physicians.

A relationship customary among cultivated gentlemen should characterize the connections between members of the medical profession. Confine the thrashing out of interprofessional personal problems to conferences with your colleagues. Discussion of conflicting views between physicians serves no useful purpose when carried on within earshot of those outside the profession, and tends to degrade us individually and collectively in the estimate of those not qualified to sit in judgment on the issue.

Never hesitate to request consultation. Laymen take great pride in saying, "My doctor knows when to call for help." There is nothing which instils more confidence than realization on the part of the patient that when needed his physician will call in a consultant. The patient is conscious of the fact that today no one knows it all and that consultation is for his own good. Next in importance to the good of the patient is the good of the referring physician. Consultation provides another method for the physician to add to his capital investment, which finally matures in that wonderful asset called experience. It is our individual duty to see that each patient receives the best care which can be rendered by the profession and not just the best care which can be rendered by an individual physician. The consultant should manage situations in such a manner that the patient retains respect for the referring physician and for the profession.

Your duty to the profession as a whole is discharged by exemplary conduct and skill in the care of the patient and friendly and helpful relationship with your colleagues. In addition, you should actively support professional organizations created for the purposes of furthering the aims and ideals of medicine and protection against agencies striving to curb our independence, individuality and sphere of influence.

May we take this opportunity to welcome you as colleagues in an ever challenging but altogether wonderful profession and leave with you the thought that ethical conduct will allow you "... to enjoy life and the practice of the art, respected by all men, in all times!"

FORCES AFFECTING THE COMMUNITY'S HOSPITAL BILL

Forces beyond the control of the hospital will continue to increase the community's hospital bill rapidly, according to Ray E. Brown, superintendent of the University of Chicago Clinics.

Cultural, economic and medical forces determine the community's total hospital bill and the demands the community makes upon its hospitals, Mr. Brown said in the first part of a two-part series on "Forces Affecting the Community's Hospital Bill," published in *Hospitals*, Journal of the American Hospital Association.

"Neither the voluntary hospitals nor the voluntary prepayment plans can significantly alter these forces, generated by the community, which promise to continue to push the community's hospital bill upward rapidly," Mr. Brown said.

These community forces "are cumulative in their impact, and in the long run will more significantly affect the community's total expenditures for hospital care than will the predicted increase in costs per patient-day of care," he said.

"It is urgent, however, that the community understand the source of these forces and their effect on the community's hospital bill before irreparable harm is done to the prepayment movement and to the voluntary hospital system through public misconceptions and misdirected intervention by state regulatory bodies," he said.

Many of the forces affecting the community's hospital bill stem from the rapid population growth of the future and from the "changing characteristics of this population growth," according to Mr. Brown.

One example he gave is the projected Bureau of the Census increase in the dependent child population as compared with the more slowly growing population in age group 25-64 years.

"This one aspect of the population change means that the number of dependents covered under prepayment family certificates will be increasing by 33 per cent, while the number of family prepayment certificates will be increasing by only 20 per cent," Mr. Brown said.

The increased size of the family also means that there will be more births per prepayment subscriber, and an increasing percentage of these births will be in hospitals, according to Mr. Brown. The rapidly increasing population over 65 also affects the community's hospital bill, as older persons use the hospital more, he said.

Another factor is increased life expectancy, which will cause more use of the hospital by persons in the age group 55-64 years, Mr. Brown said. He cited a 1956 study by the Metropolitan Life

Insurance Company which showed "in terms of hospital days used, the age group 55-64 used 193 days per 100 individuals as compared with a usage of 64 days by the 35-44 age group—or a ratio of three to one."

"This finding has far-reaching implications for hospital usage. It means that the rate of hospital usage for the upper middle-aged level apparently is not very much less than that of the aged," Mr. Brown said.

He said that the "over 55" factor has "seemingly been ignored in the free-swinging charges of over-use of hospitalization leveled at members of pre-payment plans. There might be some connection between the increased utilization year-by-year and the increased number of individuals in the medically critical age group of those over 55," he said.

Other factors include the shift from farm to city of a greater proportion of the population, with the tendency to increased hospital use in urban centers, the growing nationwide accident rate, and the working wife who cannot stay home to take care of her sick husband or children, Mr. Brown said.

Mr. Brown also suggested that the decreased bedroom space of the modern house makes it more difficult for an individual to be sick at home, whereas the hospital has central facilities for the care of the sick. "A little bit of arithmetic shows the tremendous savings to the community of pooling the sick rooms in the hospital rather than constructing dwellings that provide that sick room," he added.

Another factor given by Mr. Brown was increased medical and hospital sophistication on the part of the public. "The more people learn of medical progress, the more they are apt to go to the hospital," he said. "After they go to the hospital for the first time, they are more likely to go again," he added.

FINANCING DENTAL CARE

There is a sincere desire to improve the level of dental care in the United States, especially for children during their formative years, according to Joseph F. Follmann, Jr., Director of Information and Research for the Health Insurance Association of America, who spoke recently at a forum on "Prepaid Financing of Dental Care" conducted by the Community Council of Greater New York.

When considering the feasibility of various insurance or prepaid dental care plans, Mr. Follmann stated, it is necessary to determine whether these plans answer the tests of sound insurance mechanisms, as well as whether they are the most expeditious manner of financing dental care.

In emphasizing the problems faced by prepaid dental programs, the speaker referred to England's National Health Service—a government-financed medical care scheme which includes dental care. This plan has been in operation since 1948.

"Demands made upon the National Health Service were heavy, however," Mr. Follmann reported, "and the government realistically recognized that only a reasonable proportion of the national income could be expended for medical care. As a consequence, additional charges to the patient have been instituted from time to time. . . . This might be interpreted that on a practically 'for free' basis unnecessary demands are made upon the dental profession." Mr. Follmann noted, however, that since these charges were initiated, the cost of dental care to the National Health Service has dropped considerably.

Caution on the part of health insurance companies in approaching the problem of protection against the costs of dental care is due to two factors, Mr. Follmann declared. First, limited experimentation in the United States, as well as the experience of England's National Health Service, has shown that a dental insurance program is effective only to the degree it is purchased, and until quite recently there has been little demand for this type of care. The second factor is the absence of usable statistics upon which valid cost predictions can be made.

Mr. Follmann stated that the Health Insurance Association of America, representing 267 insurance companies which write health cost policies, has been working for the past year with the American Dental Association in an attempt to develop the needed statistical base. With the development of these statistics, progress toward more insurance company coverage for dental care would be appreciably aided.

A possibility for dental care coverage might be the inclusion of the more serious and costly forms of dental care in a medical care program, Mr. Follmann suggested, leaving the more routine, less costly, controllable and luxury forms of care to be borne by the individual as the least costly, most expeditious way of handling such costs.

"Unquestionably many varying approaches will be tried in experimental fashion before a pattern finally evolves," he predicted. "To date, too little is known about the incidence and cost of dental care from an insurance viewpoint."

Several other unknowns exist, Mr. Follmann said, which will affect the cost of dental care programs. Included are such factors as the age level of a group, income level, geographic location, and the effect of fluoridation. A substantial amount of experimentation and experience will be re-

quired before these unknowns can be resolved in order to establish an accurate basis for dental care programs.

FULL LIFE NEEDED BY DYSTROPHICS

Children who are victims of muscular dystrophy have the same basic desires and needs as other children and should be given as much opportunity as possible to live a normal life. What this means in practice is spelled out in a new 25-cent pamphlet entitled *Out Of The Shadows*, released by the Public Affairs Committee, 22 East 38th Street, New York, N. Y.

"Muscular dystrophy doesn't make its victim content to live a vegetable existence," declares the author, Elizabeth Ogg. "He wants passionately to grow in the four dimensions so necessary to a child—in body, in mind, in heart, in personal experience.

The pamphlet emphasizes that "research and more research remains the only hope of saving the lives of muscular dystrophy victims." Both basic and applied research are necessary, it is argued, since "In the total war on dystrophy, applied research is like a front-line offensive, which may suddenly win a breakthrough" while "far behind the lines, some basic research team may unexpectedly discover the ultimate weapon."

"Meanwhile, for most dystrophics, one thing that may be helpful at certain stages is physical therapy—a planned regimen of exercises, orthopedic supports to maintain normal posture, and baths," Miss Ogg explains. "It is only in the past decade or so that this has been recognized."

"Many child victims, for example, fail to use the good muscles they still have," the pamphlet continues. "Well-meaning adults rush to do for them things they could do for themselves . . . Thus the children are deprived of almost all exercise."

"More schooling for dystrophics, preferably away from home, is greatly needed," Miss Ogg stresses. "From this can flow all kinds of blessings. Besides getting an education, the child participates in a social group outside his family where he can achieve something in his own right."

"New public schools, if properly designed, could include ramps and desks scaled for wheel chairs at no extra cost and could then accommodate physically handicapped children when the need arose."

Parents are warned, however, that "before you can see your child as a human being with normal human needs and not merely as a sickness, you must be relatively free of inner tensions yourself."

"Talk out your anxieties with husband or wife, clergyman, doctor, social worker, or psychologist," parents are told. "Freed of your worst anxiety,

you will be more likely to let your sick child achieve and grow like any other youngster. As you praise him for accomplishment, you discipline him for shortcomings . . . Even his physical health depends on discipline—he must be kept to a strict diet to prevent overweight."

"Love him, treat him, discipline him as much as possible like a normal child, on a par with any other children in the family," the pamphlet concludes. "Help him to expand his skills and interests. Try not to neglect your own interests and needs. When the going gets rough, talk it out with someone you trust."

Out Of The Shadows is the 271st in the Public Affairs Pamphlet series which is now in its 23rd year. The series has included many other distinguished titles covering social and economic problems, family relations, health and intergroup relations.

SOUTHEASTERN ALLERGY ASSOCIATION

The Southeastern Allergy Association will hold its annual meeting on October 31 and November 1, 1958 at the Heart of Atlanta Motel. All persons interested are cordially invited to attend. Further information can be obtained from the secretary, Katharine B. MacInnis, M. D., 818 Albion Rd., Columbia, S. C.

AM. BOARD OF OBSTETRICS AND GYNECOLOGY

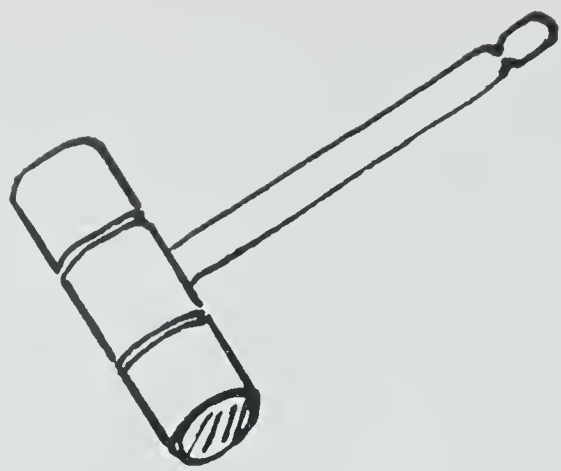
The Part I examinations of the American Board of Obstetrics and Gynecology are to be held in various parts of the United States and Canada, on Friday, January 16, 1959, at 2:00 P. M.

Candidates notified of their eligibility to participate in Part I must submit their case abstracts within thirty days of notification of eligibility. No candidate may take the written examination unless the case abstracts have been received in the office of the Secretary.

Current bulletins outlining present requirements may be obtained by writing to the Secretary's office, 2105 Adelbert Rd., Cleveland 6, Ohio.

BIRMINGHAM SOCIETY OF CLINICAL HYPNOSIS

This Society, organized in February of 1958, meets monthly on the second Thursday at 8 P. M. in Room 457 of the Alabama Dental School, Birmingham. All persons eligible and interested are invited to write the Secretary, Dr. W. A. Cunningham, 5333 First Avenue N., Birmingham, for information.



President's Page

ALCOHOLISM

As your President I recently attended the opening of the Alabama Commission on Alcoholism's new Out-Patient Clinic in Birmingham. As you know, for some years the Legislature has provided \$5,000 annually to finance this Commission. The last Legislature increased the appropriation and this added money permitted the establishment of the Clinic. Other clinics are planned. As doctors we should give them our full support and cooperation. Almost daily we are called on to treat someone who is suffering from the ill effects of alcohol. All too often we see its tragic effects on families and homes. If, by some magic edict or decree, all alcoholic liquors could be banished with completeness and finality, I rather expect that many physicians would rush with me to sign the decree. Experience with prohibition and the Volstead Act has shown us that this cannot be done. I doubt that any law can ever be devised that will abolish the use of a substance that has such a profound effect on our psychic content.

With its wide public acceptance, in spite of the easily recognized harms, the question naturally arises: Is there any real good in the "stuff"? Having studied and practiced medicine in the anti-phlogistine era before the coming of the sulfas and penicillin, I remember many learned discussions on the merits of liquor in the treatment of lobar pneumonia. As far as I could tell it was not too helpful. Timothy Leary's observation that those doughty Bostonians who died in the snow of alcoholic excess showed less atherosclerosis at post-mortem examination than those proper Bostonians who died of more natural causes was most reassuring. Today, in this era of Ancel Keys, saturated fats and unsaturated fats, I no longer find his observations referred to, so apparently our researchers who have tilted their spears against atherosclerosis are no longer impressed with the observation. The one property that makes alcohol most attractive to us all and may indicate some good effect is its remarkable power to shed inhibitions and relieve tension. This certainly accounts for its wide social acceptance. A friend who spent her youth in one of the Scandinavian countries remarked to me once that the Scandinavian men were fundamentally dull and she felt they needed

alcohol. A wise doctor might well prescribe a drink before dinner to the driving business executive who rushes home with his brief case under arm. Thirty minutes or an hour spent over a cocktail discussing the affairs of the day with his companion can create an atmosphere of relaxation, a mood of conviviality and perhaps promote marital felicity. After dinner the executive is sleepy and puts off the matters in his brief case until the next morning when they can be better handled. On the other hand this seemingly benign advice is fraught with great danger. Not so much because the advice is bad but because the cook may have been late with dinner, or one of the parties may have experienced something that compelled him or her to drink a great deal more, or because long continued use of anything so pleasant may create a tolerance and desire for more. All too often we find the executive and his companion drinking two, three or perhaps four cocktails and the trouble has started. Today I find myself giving this advice very rarely although I do not condemn the practice in those who seem to have adjusted to it.

How should a doctor approach alcohol in his personal life? I am convinced that taking a drink does not impair a physician's success in the practice of medicine. The great majority of doctors take a drink. In this majority there must be some of the better ones. A few doctors do not drink because they do not like alcohol or its effects. It is an acquired taste. A few, perhaps because of some early experience, develop a violent fear and hatred for anything alcoholic. At times their intolerance can be just as frightening and disturbing as an alcoholic's compulsion. I am inclined to believe that the public places greater confidence in a doctor whose tolerance and understanding permits him to take a drink and become a part of their great majority. At the same time there can be no excuse for the doctor who drinks to the point that his efficiency as a physician is impaired. Strangely enough, the general public seems to be more tolerant of these unfortunate individuals than we are as doctors.

The solution to the problem of alcoholism has not been found and I do not have the temerity to offer suggestions. I was interested to learn that the Alabama Commission's Clinic had employed a

psychiatrist to be a part of its staff. Psychiatrists may some day bring out the solution to the problem but they will need a lot of help. Alcoholics Anonymous has had greater success with those with whom I am acquainted than any other organization. I am not familiar with all of their precepts but these have impressed me particularly: First, a candidate should have reached the bottom, and admit, for the time at least, that he is no master for alcohol. The second, being down he must look for some Power beyond himself to help him overcome his enemy. Third, that it is human to err and that he may expect to fall back at times. Fourth, since it is human to err, the members will call on a fellow member who has fallen and help him to get up again. Some of these points could be the basis for a real religion. What can we do as doctors?

Certainly we can recognize alcoholics as sick people who need help. Some of the complications of alcoholism can offer real problems in altered physiology. Recently I heard a young physician whom I admired very much say that he would not treat an alcoholic. This unfortunate remark no

doubt reflected his feeling of futility toward the matter. We all sense this at times but there is a humanitarian side to the practice of medicine that makes us try again when the need is great. Finally, we should join hands with our spiritual and educational leaders in trying to develop a more mature attitude toward the use of alcoholic liquors. Prohibition was repealed over twenty years ago but some of the attitude that it was smart or smartalec to drink still persists. Perhaps if we could abandon the widely held idea that it is sinful to drink and accept the point of view that alcoholic drinks can be pleasant but must be used with great care it might be helpful. I wonder how many young people still take their first drink on the sly.

Colman J. Furber



ASSOCIATION FORUM

A VIEW OF OUR FAMILY PHYSICIANS

(From Health Information's *Progress in Health Services*)

Despite the increasing importance of specialists, the family physician remains a key figure in modern medical practice. He is medical adviser and manager for the overwhelming majority of our population, and for many he remains the sole point of contact with the medical profession. As a result, he is the single physician most likely to influence the public's conception of medical practice.

Today, the average family doctor is a man in his forties, a well-established general practitioner in private practice, deriving his income from fees. He treats 26 patients a day, spending over 8 hours on home and office calls. He sees most of his patients in his office or at their homes, but usually has hospital staff privileges.

These and other findings about family physicians emerge from a recent survey by the National Opinion Research Center at the University of Chicago in cooperation with Health Information Founda-

CHART I
FAMILY PHYSICIANS BY AGE
UNITED STATES, 1955



tion. The study, conducted in the summer of 1955, was intended primarily to find out what the Amer-

ican public thinks and does about health and health facilities.*

Some 2,400 persons, representing a random cross-section of the country's adult population, were interviewed at length; each was asked to name the doctor he regarded as his family physician or the doctor he would most probably call if he became ill. Interviews were then conducted with almost 500 physicians, constituting a random sample of those named. The data presented here are based largely on preliminary tabulations of the information supplied by these medical men.

Most of the physicians in this sample are relatively young men, and the largest group (over one-third) are in their forties (see Chart I). Those under 40 and those in their fifties each constitute an additional fourth of the total. The remainder, aged 60 and over, constitute 15 per cent while for an additional 1 per cent age was not determined.

Nearly all of these family doctors (99 per cent) are men, and 97 per cent are white. More than nine out of ten were born in this country, and two out of three had native-born fathers as well. About two-thirds identified themselves as Protestant, one-fifth as Catholic, and one-eighth as Jewish; 2 per cent said they followed no religious creed.

The physicians in this sample, because of their method of selection, correspond closely in their geographic distribution to the U. S. population. The respective proportions in each region are: Northeast, 25 per cent; North Central, 30 per cent; South, 33 per cent; and West, 12 per cent.

By size of community, too, the surveyed doctors closely resemble the U. S. population. In the group as a whole, 30 per cent are located in large metropolitan centers, 26 per cent in small metropolitan areas, 19 per cent in urban counties, and 25 per cent in rural counties.*

The younger physicians in this sample are generally concentrated in smaller communities. Thus 37 per cent of all these physicians in rural counties are under age 40, in contrast to about one-fourth at these ages in the nation as a whole. Family physicians in their forties, on the other hand, are more heavily represented in the nonmetropolitan urban counties and the smaller metropolitan centers. Those 50 and over show a higher-than-usual concentration in large metropolitan areas.

*A report on this study is being prepared by the National Opinion Research Center.

*"Large metropolitan centers" refers to the 14 Standard Metropolitan Areas with populations of 1 million and over in the 1950 census, while "small metropolitan areas" are those with populations under 1 million. "Urban counties" are nonmetropolitan counties containing at least one city of 10,000 or over, and rural counties comprise the remainder.

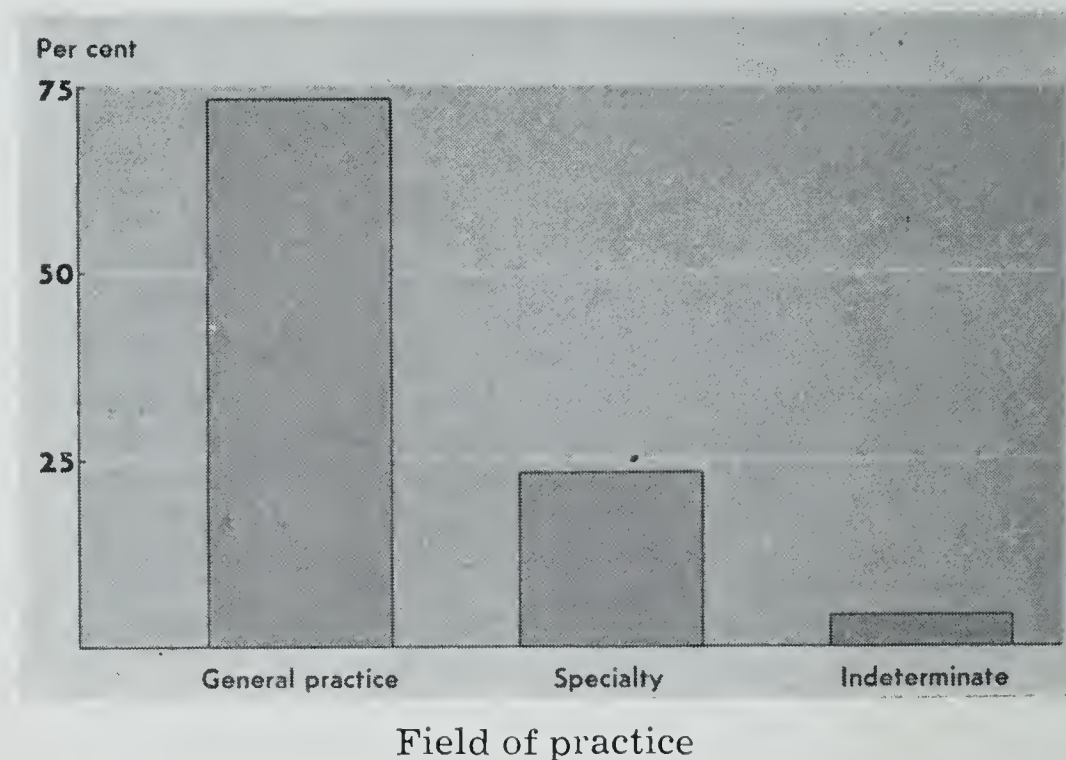
At the time of the survey most of these physicians were well-established in their practice. All but 5 per cent had received their medical degrees at least five years before the survey, and about half had been M. D.s for 20 years or more.

Also, most of these doctors had been in their present location (regardless of where it was) for a long time. More than half had lived in the same area for 25 years or more, and about the same proportion had practiced there at least 15 years. Over seven out of ten had never practiced in any other area.

FIELD AND TYPE OF PRACTICE

The physicians interviewed are representative of those to whom the U. S. public first turns for medical care or advice. However, the sample differs from the *entire* medical profession in this country, in that the great majority (73 per cent) of these family doctors said that theirs was a general practice. (Less than half of the total medical profession classifies itself as general practitioners without certification or special interest in a specialty.*) Only 23 per cent concentrate in a specialty, and 4 per cent either did not reply or else named both a specialty and general practice (see Chart II).

CHART II
FAMILY PHYSICIANS BY FIELD OF PRACTICE
UNITED STATES, 1955



Fourteen per cent of the survey group are members of some American specialty board, and 20 per cent belong to a specialty society. On the other hand, 21 per cent belong to the American Academy of General Practice.

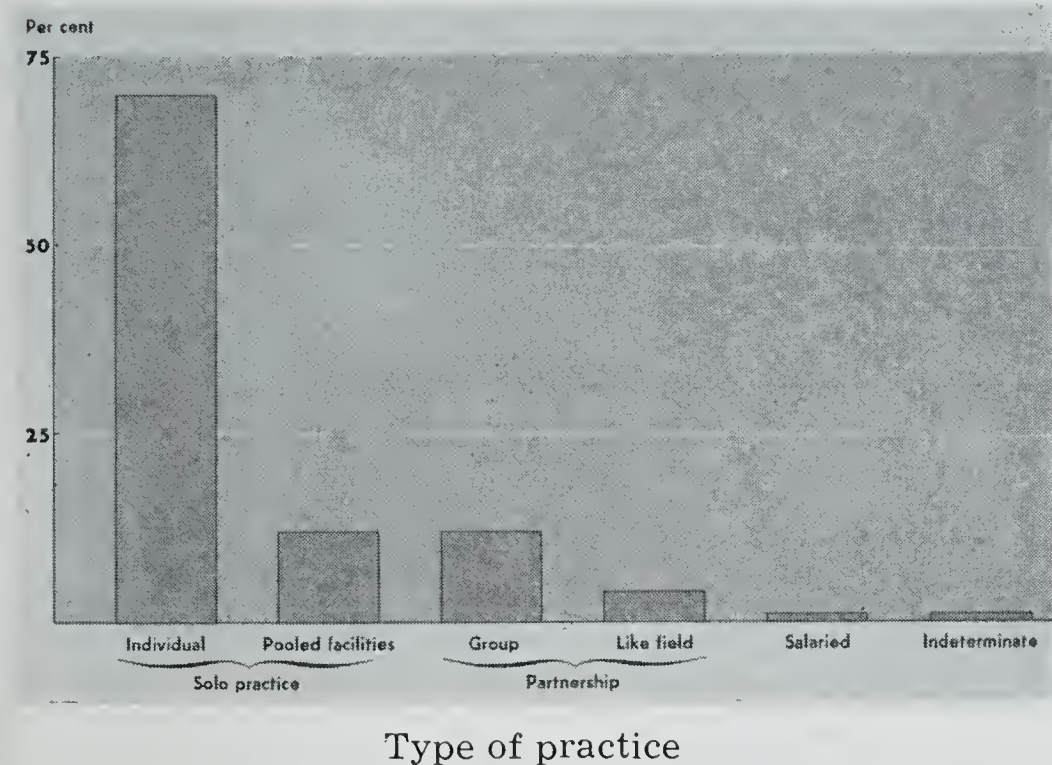
The proportion of general practitioners was higher in the aged-60-and-over category than at younger ages and also higher than average in rural counties. In metropolitan areas, however, about

*American Medical Directory, 1956 Edition.

one out of three family doctors was a specialist, with about the same proportion in the West, where the figure was also higher than the national average.

The sample differs from the entire medical profession in at least one other important respect, in that almost all these doctors are in private practice, while for the profession at large only about three-fourths are in this category. And among these family physicians the vast majority (more than four out of five) are in solo private practice—70 per cent in strictly individual practice and another 12 per cent sharing facilities with another medical man. About 16 per cent practice in medical groups or partnerships, and only 1 per cent work on a full-time salaried basis (see Chart III).

CHART III
FAMILY PHYSICIANS BY TYPE OF PRACTICE
UNITED STATES, 1955



Solo practice is especially common among doctors aged 60 and over and those residing in the Northeast region. On the other hand, medical groups and partnerships are relatively common in the North Central and West regions.

THE ECONOMICS OF FAMILY MEDICAL PRACTICE

The income of these family physicians showed considerable variation. In 1954-55 (a 12-month period before this study) 21 per cent netted less than \$10,000 from their practice; 45 per cent netted between \$10,000 and \$20,000; and 33 per cent netted \$20,000 or more. The median net income before taxes was slightly higher than \$15,000.*

Doctors in their fifties usually reported higher income than those in other age categories; 43 per

*In a mail survey of 5,000 physician-readers of *Medical Economics*, the median net income for general practitioners was reported at \$14,817 in 1955. W. Croatman, "Are You Better Off Than the Typical G. P.?" *Medical Economics*, April 1957. In both surveys, the term net income refers to income from medical practice after deduction of professional expenses but before income taxes.

cent of the physicians in the 50-59 group netted \$20,000 or more. By contrast, only 19 per cent of those 60 and over (the category in which incomes were generally lowest) netted \$20,000 or more.

Incomes were considerably higher in the West and North Central regions than elsewhere and were also higher for members of specialty societies and for family physicians who practice in medical groups and partnerships. On the other hand, incomes were lower than average in both rural counties and large metropolitan centers.

Most of these physicians (over four-fifths) maintain their offices away from their homes. Nearly all (seven-eighths) employ one or more assistants who are other than M. D.s. Among those with aides, about half employ only one or less (full- or part-time). Most of these aides provide secretarial and clerical help, but a substantial proportion are registered nurses. The use of auxiliary help is relatively more common among physicians under 40, those with incomes of \$20,000 or more, and those belonging either to the American Academy of General Practice or to a specialty society.

For the typical family doctor, home and office calls comprise the bulk of the workday. Three out of four spend seven hours or more a day at these procedures, and over 40 per cent work nine or more hours at them. When allowance is made for hospital visits, the estimated median workweek of these physicians comes to roughly 60 hours.*

The average family doctor puts in about six hours a day on office calls and about an additional two hours on house calls. Only one in fourteen makes no house calls. Most (four out of five) are generally available at night and Sundays for emergency house calls.

The family doctor averages about 26 patients a day, most of them in his office. But higher patient-loads are fairly common: 17 per cent of all doctors see more than 40 patients a day, and 36 per cent see more than 30. Only 18 per cent see 15 or fewer patients.

At the time this study was made, two out of three family physicians charged under \$4 for a routine office call. The \$3 office-call charge was the fee mentioned most often. For house calls, the most common charge was \$5.

Fees were higher in the West, in large population centers, among doctors in their forties and fifties, and among those netting \$20,000 or more a year. Specialists' fees generally ranged above those of G. P.s for comparable procedures.

Most doctors—63 per cent—said they regulate their fees to some extent by their judgment of the patient's ability to pay. The remaining 37 per

*W. Croatman, *op. cit.*

cent charge all patients alike. The practice of charging a standard fee is somewhat more common among doctors under 40 and among those netting at least \$20,000 a year. Doctors in the West and members of specialty societies are especially likely to gear fees to the patient's ability to pay. Ability-to-pay fee arrangements are more common in the metropolitan areas.

Nearly three-fourths of the doctors "almost always" discuss costs of extra medical services with patients in advance, while 15 per cent discuss such costs "sometimes" and 13 per cent hardly ever mention them.

Most of the family physicians maintain hospital connections. About seven-eighths are affiliated with one or more hospitals, and 45 per cent are on the staffs of at least two hospitals. The proportions with hospital affiliation are smallest among those aged 60 and over (70 per cent) and among physicians in rural counties (74 per cent). They are highest among physicians with incomes of \$20,000 and over (95 per cent), members of specialty societies (99 per cent), and the American Academy of General Practice (96 per cent).

In this connection, more than half (56 per cent) of these family physicians perform free services at their hospitals, while 30 per cent, though affiliated, do no free work. (The remaining 14 per cent are without affiliation.) Among those doing free work in the hospital, the median time involved is roughly five hours a week.

All but a negligible number of family doctors belong to a medical organization. Nearly half (47 per cent) belong to only one (usually the American Medical Association through a county and/or state medical society); 31 per cent belong to two, and 22 per cent to three or more. Doctors in their forties and fifties, those practicing in metropolitan areas, and those with high incomes, average the largest number of memberships.

The family physician today carries on many of the traditional functions of the general practitioner of former years. He works long hours, carries a heavy patient-load, and is generally available for emergency duty. Adapting to the changing demands of modern medical practice, a high proportion of family doctors now have hospital-staff affiliations. As far as the general public is concerned, the family physician is still the focal point of medical care and still provides the major image of what a medical practitioner is like.

ANNUAL SESSION
APRIL 9, 10, 11, 1959
DINKLER-TUTWILER HOTEL
BIRMINGHAM

Article Refutes Claims Of Food Faddists—Americans actually have to go out of their way to avoid being well nourished.

Yet thousands of food supplement salesmen are trying to convince people that improper diet is to blame for most disease and that it can be cured by taking food supplements.

The food supplement business is a multi-million dollar one. It could be considered a "mildly amusing confidence game" except that it is also highly dangerous, according to an article in the September Today's Health, an American Medical Association publication.

It is dangerous because persons with serious ailments neglect proper medical treatment in the hope that they can find "a cure in a capsule."

Food supplements are pills, powders, pellets or capsules that often contain vitamins and minerals, usually in amounts far greater than the body needs, and some "mysterious ingredient" that is usually nothing more than a combination of dehydrated vegetables and plants.

The seven most popular pitches used by the self-styled "nutritional advisers" in selling their supplements are outlined—and refuted—by Joseph N. Bell, Chicago, in the Today's Health article. It is part of a campaign being conducted by the A. M. A., the Food and Drug Administration, and the National Better Business Bureau to combat food faddism.

The pitches are:

—Most disease is due to improper diet. The fact: There are a few diseases caused by dietary deficiencies, but they are rarely found in the United States. By patronizing all departments of a grocery store, a person can easily supply all of his nutritional needs.

—Soil depletion causes malnutrition. The fact: The composition of the soil has very little effect on the composition of plants grown on it. If certain soil elements are missing, the plants simply don't grow.

—Chemical fertilizers poison the land and the crops grown on it. The fact: Extensive government research has shown that the nutritional value of crops is not significantly affected by the soil or the fertilizers used.

—Wonder power of wonder foods, such as 100 per cent whole grains—cereals, flours, bread and crackers; honey; maple syrup; blackstrap molasses, or raw vegetables. The fact: These are good foods, but they are not wonder foods and do not supply any miracle nutrients.

—Certain types of cooking utensils, especially aluminum, are harmful to foods. The fact: The U. S. Public Health Service says hospitals the country over use aluminum cooking utensils. They certainly would not if research had given the slightest suspicion of danger from it.

—Processing removes nutritional values from food. The fact: Modern processed foods actually contain more nutrients than the same foods prepared by home cooking methods. Fruits and vegetables are canned or frozen at the peak of nutritional perfection, and flour, bread, milk and margarine are all improved in processing to supply known dietary requirements.

—Subclinical deficiencies are a constant danger. The fact: This statement has no meaning. Subclinical means without symptoms. Normal tiredness or "a worn out feeling" is said by the peddler to be a subclinical deficiency. If such feelings persist, a competent physician should be seen. They may be the forerunner of serious disease.

In conclusion Bell said, "If you suspect a diet deficiency don't let quacks prescribe for you. Consult your physician . . . Eat sensibly, eat intelligently, eat economically—and for goodness sake, eat Food."



MEDICAL CENTER NEWS



Presents Air Conditioner—Matthew F. McNulty, Jr., (right) University Hospital Administrator, and Sue Richmond, student nurse, look on while William C. Lanham, of General Electric, is thanked by a patient for a room air conditioner recently presented to the hospital by General Electric.

UNIVERSITY HOSPITAL GIVEN AIR CONDITIONER BY GE

The Medical Center was recently presented with a 1½ ton air conditioner for use in the Emergency Department of University Hospital. It was presented to Matthew F. McNulty, Jr., Hospital Administrator, by William C. Lanham, Alabama District Manager for Sales and Distribution of the General Electric Company. The air conditioner was the 1,000,000th Thin Line Air Conditioner made by GE.

"This will certainly help a great many people," said Mr. McNulty. "We treat an average of about 500 emergency patients a month and this unit will make those patients a lot more comfortable. We are deeply grateful to Mr. Lanham for the generosity of this donation. It couldn't have been placed in a spot where it was needed more."

DR. HOMER W. SMITH TO GIVE ALPHA OMEGA ALPHA LECTURE

Dr. Homer W. Smith, who is Professor of Physiology and Director of the Physiological Laboratories of New York University College of Medicine, will give the annual Alpha Omega Alpha Lecture for the Alpha Chapter of the University of Alabama College of Medicine on November 20, 1958. This lectureship will follow the annual initiation dinner to be held at Mountain Brook Coun-

try Club in Birmingham, Alabama, where the new student initiates as well as the student and alumni members will be in attendance.

Dr. Smith is widely known for his work in the field of renal physiology and is the author of several texts on this subject. He is a prolific writer and has published many articles in national journals. He is a member of many national societies and presently is the Associate Editor of the *Journal of Cellular and Comparative Physiology*.

Proper notification of the membership of AOA will be forthcoming prior to this event in honor of the new initiates of Alpha Omega Alpha.

TINSLEY HARRISON LECTURE SCHEDULED NOVEMBER 25TH

The first Tinsley Randolph Harrison Lecture will be given on Tuesday, November 25, 1958, at 8 p. m. in the University Hospital Auditorium. The



annual Harrison Lectureship was made possible through the contributions of the many friends, students, house officers and associates of Dr. Harrison.

Speaker for this program will be Dr. William Dock, Professor of Medicine at the State University of New York, Downstate Medical Center, in Brooklyn, New York. Dr. Dock will also participate in Medical Grand Rounds on Tuesday, November 25.

The title of his essay for the Harrison Lectureship will be "Medical Investigators from Harvey to Harrison."

All students, house staff, faculty, and other interested persons are invited to attend this function.

PAPERS PRESENTED

Two papers were given at the Southeastern Regional Meeting of the American College of Physicians which was held in Biloxi, Mississippi, on October 3 and 4. They were presented by Dr. William J. Hammack, Instructor in Medicine, and Willard Starnes of the Department of Medicine, and by Dr. Howard L. Holley, Associate Professor of Medicine.



New Visual Aid Clinic Opens at Hospital—Technician Betty Anderson at work with patient.

VISUAL CLINIC OPENS AT MEDICAL CENTER

A new visual aid clinic at the Medical Center was opened recently which will offer hope and help to many partially-sighted persons in this area who cannot benefit from ordinary glasses.

The clinic was made possible by a federal grant-in-aid, channeled through the State Department of Vocational Rehabilitation, and will be operated under direct supervision of the Department of Ophthalmology of the Medical College, headed by Dr. Stephen J. Kelly and Dr. Charles P. Grant. Clinic technician is Miss Betty Anderson, who recently underwent special training at the Lighthouse of the New York Association for the Blind, and at Walter Reed Hospital in Washington, to prepare her for the work. She will work only under the direction of eye doctors who have previously assessed the patient's degree of visual deficiency.

The clinic, first of its kind in the Southeast, is equipped to provide special optical aids such as telescopic spectacles, hand magnifiers and microscopic bifocals for patients referred to it by their doctors. In addition to equipping the patient with custom-made visual aids, the clinic also will offer services of social and psychiatric workers for patients with adjustment problems. The clinic is a joint project of University Hospital and the Medi-

cal College and will serve both indigent and private patients, on a referral basis only.

MEDICAL CENTER PROFESSORS RETURN

DR. LYONS

Dr. Champ Lyons, Professor and Chairman of the Department of Surgery, has returned from a month in Japan where he served as Civilian Consultant in Surgery to the Surgeon General of the U. S. Army.

Dr. Lyons' responsibility was to evaluate the competency of the professional program in Korea and to bring to the medical representatives in military service the latest advances in surgery.

Dr. Lyons also brought back to medical students his experiences gained on the tour so that they might be prepared to face unusual medical problems when called to active duty with the services. (All medical men must serve two years in military service.)

According to Dr. Lyons, the most serious problem is a logistic or movement problem created by the great distances from the Far East to Honolulu, the base of the Surgeon General for the Far East Command.

DR. REEVES

Dr. T. Joseph Reeves, Associate Professor of Medicine in the Cardiovascular Section of the Department of Medicine, has just returned to his duties here, after having spent a year with Professor Melville Arnott at the Queen Elizabeth Hospital, Birmingham University School of Medicine, Birmingham, England.

During his year as a National Institutes of Health Exchange Fellow, Dr. Reeves did research in cardiovascular physiology and diseases. He also visited other cities and countries on the continent, including Rome, several Scandinavian countries, and Russia.

DR. J. F. A. McMANUS RECEIVES \$145,000 GRANT

Dr. J. F. A. McManus, Professor and Chairman of the Department of Pathology, was recently awarded a \$145,000 research grant from the National Institutes of Health.

Dr. McManus said the grant, one of the largest of its kind in recent years, is for training men in the field of pathology. Emphasizing the serious need of trained personnel in pathology, he said such grants would help to meet at least part of the shortage of trained pathologists in Alabama.

201 STUDENTS ENROLL IN THREE SCHOOLS
AT MEDICAL CENTER

The Medical College accepted 81 students, the Dental College 53, and the University Hospital School of Nursing 67 for new classes which began in September.

SCHOOL OF NURSING TO SHARE GRANTS

The School of Nursing will share in \$2 million of grants and awards for the training of public health specialists, it was announced recently by the U. S. Public Health Service in Washington.

Two grants, totaling \$6164, will come to the school. Recipients will spend a year training in the public health nursing field.

MISS GASSMAN DIRECTS PSYCHIATRIC
SOCIAL SESSIONS

The Department of Psychiatry has begun instruction in the related discipline of psychiatric social work under the direction of Miss Frances Gassman, Chief Psychiatric Social Worker.

The field of psychiatric social work includes a period of field placement, which corresponds to the clerkship training of medical students. During a concentrated period of four to six months, students receive experience in working with people and understanding their total personality problems.

Inasmuch as Alabama has no school of social work, there will be three student social workers placed with the department by schools of social work from adjoining states. Miss Elizabeth Kendall of Florida State University began her training on September 2, and two other students will arrive from the University of Tennessee on October 15 to start their field training.

SOCIETY OFFERS BOOKLET

An attractive booklet, "The Business Side of Medical Practice," prepared by the American Medical Association, is being provided to all residents, interns, and senior medical students by the Jefferson County Medical Society.

This comprehensive booklet goes into detail on all aspects of choosing a location for and establishing a medical practice. Fifty-two pages, illustrated with diagrams, it covers such subjects as choosing a practice location, floor plans, model collection systems, billing forms, and many other practical details.

GENERAL MEDICAL PROGRAM SET FOR
NOVEMBER 28-29

The first general medical program for alumni and friends of the Medical Center will be held by

the clinical faculty of the Medical College on Friday and Saturday, November 28 and 29.

Dr. Robert C. Berson, Vice President of the University in Charge of Health Affairs, and Dean of the Medical College, will give the official welcome. Opening remarks will also be made by Dr. J. Henry Goode, President of the Medical Alumni Association of Alabama.

During the Clinical Seminar on Friday, November 28, presentations will be made from the Departments of Surgery, Obstetrics and Gynecology, Psychiatry, Medicine, and Pediatrics. Those participating will be Drs. Josiah C. Carmichael, Associate Professor of Obstetrics; W. N. Jones, Professor of Obstetrics and Gynecology; J. N. Sussex, Associate Professor of Psychiatry; E. L. Caveny, Professor of Psychiatry; H. Victor Murdaugh, Assistant Professor of Medicine; T. R. Harrison, Professor of Medicine; and L. M. Barger, Jr., Instructor in Pediatrics.

On Saturday morning, November 29, a medical and surgical conference and also a clinical pathological conference are scheduled. All the scientific sessions will be held in the University Hospital Auditorium.

Dr. E. B. Carmichael, Professor and Chairman of the Department of Biochemistry, is Chairman of Arrangements for the meeting.

HEARING AND SPEECH CLINIC ADDS TWO
STAFF MEMBERS

Miss Karen Rammelt and Mrs. Joanne Hayes have recently joined the staff of the Hearing and Speech Clinic at the Medical Center.

Miss Rammelt holds a B. S. degree and an M. S. degree in speech pathology and audiology from the University of Wisconsin. She is a member of the American Speech and Hearing Association and holds basic certification in speech. She was Director of Speech Therapy at the University of Wisconsin Neurological Foundation before joining the Hearing and Speech Clinic Staff.

Mrs. Hayes obtained her B. S. degree at Texas Woman's University and also holds basic certification in speech in the American Speech and Hearing Association. Mrs. Hayes has been employed as Speech Therapist in the public schools at Odessa and San Angelo, Texas, and the San Angelo, Texas, Handicapped Children's Treatment Center, and the Birmingham public school Speech and Hearing Center.

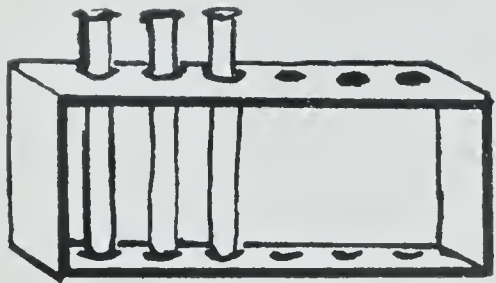
DR. ROBERT LONGLEY JOINS BIOCHEMISTRY
DEPARTMENT

Dr. Robert W. Longley is a recent addition to the staff of the Medical Center, having joined

the Department of Biochemistry as Assistant Professor.

Dr. Longley received both his Master's and Ph. D. degrees from George Washington University, Washington, D. C. His research interests have been principally in the field of glycogenesis in the

liver of experimental animals. He comes to us from Dorn Laboratory for Medical Research where his work was entirely research. In addition, he has done some lecturing on carbohydrate metabolism at the St. Bonaventure University in Olean, New York.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

THE PUBLIC HEALTH LABORATORIES

Alabama's public health laboratories have completed 50 years of service to the citizens of the state. This 50-year period has seen the control or virtual elimination of many of the communicable diseases which once took such a heavy toll of lives. Because laboratory services are offered through private physicians and county health departments, there is probably no general awareness of the contribution the laboratories have made and are making to public health.

Working behind the scenes, so to speak, the laboratory has played an important part in the fight against diseases such as diphtheria, smallpox, typhoid fever and tuberculosis. The laboratories' contribution has been the performance of such services as identifying the agents responsible for epidemics, confirming the diagnosis of diseases like polio and tuberculosis, manufacture and distribution of vaccines, determining the causes of food poisoning outbreaks, checking milk and water for purity, and doing research work on various public health problems.

Establishment of a laboratory "in which pathological and bacteriological examinations and investigations may be carried on" and employment of a bacteriologist were authorized by the State Board of Health in 1907. Although laboratory work was apparently done before that time, there is little evidence as to where and by whom it was performed. Seemingly, much of it was done by the State Health Officer. At any rate, there are references to "microscopic examinations" in health department records dating as far back as 1883.

During its first full year of operation, 1908, the laboratory examined 452 specimens. Examinations included those for evidence of hookworm infestation, tuberculosis, malaria, diphtheria and

contamination of milk and water. In addition, there were 96 examinations of animal heads for rabies, and rabies treatments were administered to 72 persons. Personnel consisted of a bacteriologist and one assistant. From this small beginning has come the present system of public health laboratories which includes the central laboratory at Montgomery and eight branch laboratories. These laboratories, which employ from 80 to 100 persons, examined almost half a million specimens during 1957.

During the early years of operation the laboratory was known as the State Laboratory and Pasteur Institute. During this period, in addition to examinations of a public health nature, clinical examinations were performed on a fee basis. This service was discontinued when other laboratory facilities became available to practicing physicians. A great deal of time was devoted to administration of the Pasteur treatment for rabies. Persons requiring treatment had to come to Montgomery for a period of three weeks, and the State Bacteriologist administered the treatments. Not until 1921 did the present system of distribution of rabies vaccine begin, enabling persons to receive treatment from their own physicians in their own home towns.

The necessity for offering this latter service was one factor which probably kept the use of the laboratory from increasing much at first. The main factor which prevented full utilization of laboratory services, however, was the necessity for sending all specimens to Montgomery. Too much time was lost in the mailing of specimens and reports. Physicians and health officers often could not afford to wait for reports, and they either performed their own laboratory work or did without such service.

This situation was partially remedied by the establishment of a branch laboratory at Mobile in 1922. The following year branches were opened in Birmingham and Albany, the latter later being transferred to Decatur. The first three branches

were established with the aid of a grant from the International Health Board of the Rockefeller Foundation. The Tuscaloosa and Anniston branches began operation in 1924, the Selma Laboratory in 1928 and the Dothan branch in 1930. During 1930, the Madison County Laboratory at Huntsville was brought under state supervision and later became a branch laboratory.

The establishment of the branch laboratories marked the beginning of real growth of use of laboratory services. The Health Department's annual report for 1924 states that establishment of the first three branch laboratories produced a 200 per cent increase in the number of specimens examined. Use of laboratory services has increased each year since that time with the exception of the depression and war years when lack of funds and shortage of personnel made it necessary to curtail services for a time.

All indications are that this growth will continue. Use of laboratory services has already increased to the point that it has become necessary to organize the Central Laboratory into divisions according to the nature of the work performed. There are the Bacteriology and Virology, Biologic and Media, Microscopy, Sanitation, Serology, Tuberculosis and Library and Clerical Divisions.

The work of the laboratories still centers largely around communicable diseases. There is little reason to believe that there will be any let-up in the need for communicable disease control activities by the laboratories or any other division of the Health Department. On the other hand, growing emphasis in public health work on the chronic diseases, new discoveries about the virus diseases, and new concepts of public health responsibilities make it certain that the laboratories will be called on for additional kinds of service—laboratory work has always reflected trends and emphases in overall public health programs. For example, when the Henderson Act required that every person in Alabama between the ages of 14 and 50 have a blood test for syphilis, during one year 70 per cent of the laboratory specimens were bloods for syphilis serology.

There is no question then that growth of the laboratories will continue. The only question is as to what direction that growth will take. Dr. Albert V. Hardy of the Florida State Department of Health has predicted the future of public health laboratories: "The record of the past has been written. During the first chapter of the history of the public health laboratory attention was concentrated on the acute communicable diseases. . . .

"Major emphasis is directed to the chronic infections during the second and present chapter of the history. The need for case finding and for

more highly sensitive and specific tests for diagnosis has become evident.

"For the future there are numerous unexplored problems in viral and other infectious diseases. Ahead, there is a call for continuing and increasing work in sanitary bacteriology, a broad development in public health chemistry, closer integration of all laboratory services provided at public expense, new and expanding work in chronic diseases, and an education program designed to aid in improving the quality of medical laboratory service wherever it is performed."

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

September 1958

Examinations for diphtheria bacilli and Vincent's..	85
Agglutination tests	670
Typhoid cultures (blood, feces and urine).....	628
Brucella cultures	5
Examinations for malaria.....	54
Examinations for intestinal parasites.....	3,092
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid).....	30,886
Examinations for gonococci.....	1,767
Examinations for tubercle bacilli.....	3,497
Examinations for Negri bodies (smears and animal inoculations).....	172
Water examinations	2,191
Milk and dairy products examinations.....	4,312
Miscellaneous examinations	872
Total	48,232

✻ ✻ ✻

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1958

	Aug.	Sept.	E.E.* Sept.
Typhoid and paratyphoid.....	10	6	8
Undulant fever	0	0	3
Meningitis	9	8	8
Scarlet fever	10	28	31
Whooping cough	13	8	33
Diphtheria	5	1	32
Tetanus	2	2	4
Tuberculosis	200	177	210
Tularemia	0	0	0
Amebic dysentery	5	0	1
Malaria	0	0	1
Influenza	30	19	77
Smallpox	0	0	0
Measles	65	31	24
Poliomyelitis	14	8	48
Encephalitis	4	2	3
Chickenpox	3	5	6
Typhus fever	1	5	3
Mumps	20	13	34
Cancer	473	329	418
Pellagra	1	0	0
Pneumonia	125	104	103
Syphilis	118	96	136
Chancroid	1	3	9
Gonorrhea	341	334	384
Rabies—Human cases	0	0	0
Positive animal heads.....	22	12	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR JUNE 1958, AND COMPARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During June 1958			Rates* (Annual Basis)		
	Total	White	Non- White	1958	1957	1956
Live births	6251	4043	2208	23.8	24.9	24.1
Deaths	2242	1416	826	8.5	8.3	8.0
Fetal deaths	123	63	60	19.3	24.8	23.8
Infant deaths—						
under one month	186	108	78	29.8	20.1	21.0
under one year	236	130	106	37.8	26.6	30.3
Cause of Death						
Tuberculosis, 001-019	31	11	20	11.8	11.6	8.1
Syphilis, 020-029	8	4	4	3.0	1.9	1.5
Dysentery, 045-048	3		3	1.1	1.5	0.4
Diphtheria, 055					0.4	
Whooping cough, 056						0.4
Meningococcal infections, 057	1	1		0.4	0.4	0.4
Poliomyelitis, 080, 081						
Measles, 085	1	1		0.4	0.4	
Malignant neoplasms, 140-205	283	213	70	107.9	105.1	108.9
Diabetes mellitus, 260	24	11	13	9.1	7.7	10.3
Pellagra, 281	2	2		0.8	0.8	
Vascular lesions of central nervous system, 330-334	299	190	109	114.0	125.9	106.2
Rheumatic fever, 400-402	3	1	2	1.1		1.9
Diseases of the heart, 410-443	726	477	249	276.7	276.5	257.2
Hypertension with heart disease, 440-443	147	63	84	56.0	47.4	49.4
Diseases of the arteries, 450-456	58	38	20	22.1	19.6	20.1
Influenza, 480-483	4	2	2	1.5	3.5	4.6
Pneumonia, all forms, 490-493	47	24	23	17.9	13.1	15.4
Bronchitis, 500-502	3	1	2	1.1	0.8	0.8
Appendicitis, 550-553	3	1	2	1.1	0.4	1.2
Intestinal obstruction and hernia, 560, 561, 570	7	5	2	2.7	5.4	5.0
Gastro-enteritis and colitis, under 2, 571.0, 764	8		8	3.0	3.8	6.2
Cirrhosis of liver, 581	13	9	4	5.0	6.5	5.0
Diseases of pregnancy and childbirth, 640-689	6	2	4	9.4	6.0	6.3
Congenital malformations, 750-759	32	26	6	5.1	4.0	5.9
Immaturity at birth, 774-776	71	43	28	11.4	6.6	6.1
Accidents, total, 800-962	164	113	51	62.5	61.2	66.0
Motor vehicle accidents, 810-835, 960	69	52	17	26.3	25.4	28.6
All other defined causes	361	205	156	137.6	125.5	120.1
Ill-defined and unknown causes, 780-793, 795	84	36	48	32.0	28.1	32.8

PROVISIONAL BIRTH AND DEATH STATISTICS
FOR JULY 1958, AND COMPARATIVE DATA

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During July 1958			Rates* (Annual Basis)		
	Total	White	Non- White	1958	1957	1956
Live births	7003	4389	2614	25.8	27.7	27.4
Deaths	2161	1360	801	8.0	8.4	8.6
Fetal deaths	174	71	103	24.2	18.9	23.6
Infant deaths—						
under one month	165	86	79	23.6	22.6	23.8
under one year	218	114	104	31.1	29.4	31.7
Cause of Death						
Tuberculosis, 001-019	32	14	18	11.8	8.6	8.9
Syphilis, 020-029	7		7	2.6	1.1	3.1
Dysentery, 045-048					1.5	0.8
Diphtheria, 055	1	1		0.4		
Whooping cough, 056	1	1		0.4		0.8
Meningococcal infections, 057					0.4	0.4
Poliomyelitis, 080, 081						
Measles, 085						0.4
Malignant neoplasms, 140-205	291	218	73	107.3	110.3	117.8
Diabetes mellitus, 260	26	16	10	9.6	10.8	10.8
Pellagra, 281	1		1	0.4		0.8
Vascular lesions of central nervous system, 330-334	293	178	115	108.1	123.7	116.2
Rheumatic fever, 400-402	1		1	0.4	1.1	0.8
Diseases of the heart, 410-443	685	467	218	252.6	262.0	277.2
Hypertension with heart disease, 440-443	120	52	68	44.3	49.2	52.3
Diseases of the arteries, 450-456	52	34	18	19.2	19.8	16.2
Influenza, 480-483	4	3	1	1.5	1.9	1.2
Pneumonia, all forms, 490-493	39	21	18	14.4	15.3	21.2
Bronchitis, 500-502	1	1		0.4	1.5	0.8
Appendicitis, 550-553	7	5	2	2.6	1.9	1.5
Intestinal obstruction and hernia, 560, 561, 570	11	6	5	4.0	5.6	7.7
Gastro-enteritis and colitis, under 2, 571.0, 764	12	2	10	4.4	6.7	4.6
Cirrhosis of liver, 581	17	14	3	6.3	6.7	4.2
Diseases of pregnancy and childbirth, 640-689	7	3	4	9.8	11.9	6.9
Congenital malformations, 750-759	44	26	18	6.3	4.3	4.8
Immaturity at birth, 774-776	44	25	19	6.3	8.4	7.3
Accidents, total, 800-962	120	74	46	44.3	55.9	68.3
Motor vehicle accidents, 810-835, 960	58	37	21	21.4	29.1	33.2
All other defined causes	381	213	168	140.5	139.7	134.3
Ill-defined and unknown causes, 780-793, 795	84	38	46	31.0	32.0	27.0

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

December 1958

No. 6

EVALUATION OF THE PAPANICOLAOU SMEAR TECHNIQUE TO DETERMINE EARLY CANCER OF THE UTERUS

A REVIEW OF LITERATURE, WITH PARTICULAR REFERENCE
TO THE OFFICE OF THE GENERAL PRACTITIONER

JULIUS MICHAELSON

Foley, Alabama

The purpose of this paper is to focus the attention of the doctors of the state of Alabama on the Papanicolaou smear technique as an aid in diagnosing early and unsuspected cases of cancer of the cervix uteri. It is also the purpose of this paper to attempt to view this technique in its proper perspective as a valuable adjunct in the diagnostic armamentarium of every private practitioner of medicine and not as an unqualified, never failing, accurate test for cancer.

A review of the English literature covering the past ten (10) years reveals that over 185 papers have been published which discuss and evaluate this technique. Work has been done and reported on from large teaching and university hospitals, using charity patients and, in many instances, research laboratory procedures and personnel to examine the test slides. Work has been done representing a random sampling of the female clientele of a large portion of the practitioners of a populous city on the East Coast. A report has been published from a community of over half a million people on the West Coast in which it is estimated that one-third of the adult female population has been screened by Papanicolaou smears. In addition to this, many individual practitioners have reported their findings. These reviews and reports have concerned themselves with random samplings, reports on only those cervixes which were considered to be clinically normal, as well as one report which concerned itself only with a group of patients with clinically evident cancer. By actual count, the literature reviewed reported on 288,570 Papanicolaou smears. From this information, it becomes quite apparent that the report of another small series of cases would be presump-

tuous and add little to the information already obtained.

Cancer of the cervix is second only to breast cancer in incidence of neoplastic disease in adult females. Approximately 12,500 women die of this disease each year. The relationship between non-invasive carcinoma confined to the epithelium of the cervix or carcinoma in situ and invasive cancer is at present not clearly understood. However, the importance of skilful and meticulous correlation of cytologic and histologic findings are clearly demonstrated when we find that pre-invasive cancer of the cervix may prove to be a completely controllable form of malignancy.

The five (5) year survival rate in cancer of the cervix is directly related to the stage of the disease at the time it is diagnosed and treated.

Stage zero (0) or non-invasive carcinoma confined to the epithelium or carcinoma in situ may prove to have a 100 per cent five (5) year survival rate.

Stage one (I) or invasive cancer, but confined to the cervix, has a five (5) year survival rate of 70 per cent.

Stage two (II), which is invasive carcinoma spreading beyond the cervix to the vaginal wall or to the parametrial tissues, has a five (5) year survival rate of 49 per cent.

Stage three (III), or invasive carcinoma with spread to the lower third of the vagina with fixation of one or both parametria or spread to isolated pelvic nodes, has a five (5) year survival rate of 31 per cent.

Stage four (IV), which is invasive carcinoma with spread to the bladder, rectum, or distant extrapelvic sites, promises a five (5) year survival

of only 8 per cent. Thus, it is apparent that prognosis is directly related to the stage at which the disease is diagnosed and treated.

Cancer of the cervix tends first to grow upward along the cervical canal, then outward to involve the deeper layers and the parametrium, then downward to involve the vaginal wall and perineum. Because of this characteristic, a lesion that appears to be very small clinically may be the only visible evidence of far more extensive disease. Since malignant cells from the cervix exfoliate readily, they can be found in vaginal and cervical smears before there are obvious signs or symptoms of the disease. Hence, the prognostic value of cellular cytology becomes apparent. At this point it must be strongly emphasized that cytologic examination of material from the endocervical canal and from the vagina is by no means a definitive diagnostic procedure but should only lead to further histologic study, notably to what has become known as a fractional dilatation and curettage. In no case, including that of the positive smear, is treatment justified until a definitive diagnosis has been established through biopsy studies.

In the literature, in presumably asymptomatic women from whom routine Papanicolaou smears were obtained, the incidence of histologically proved carcinoma of the cervix varied from .95 per cent to 3 per cent. Biopsies were positive in from 70.6 per cent to 87.8 per cent of the cases with positive Papanicolaou smears. Biopsies were positive also in 52.9 per cent of those with suspicious smears. Most of the literature follows the same pattern so, for the sake of clarity and emphasis, I have elected to point out the salient, most dramatic and eye-opening facts from a report by Esther H. Dale et al. based on observations made over a period of approximately four and a half years from statistics obtained at the Yates Memorial Clinic at the Wayne State University, College of Medicine in Detroit, Michigan. This clinic is sponsored by a division of the American Cancer Society and this study encompassed over 16,000 smears.

"Generally speaking, cancer has been considered a disease afflicting middle-aged women and the older age group; and it has been frequently stated that cervical carcinoma is predominately a disease of women over 40. Too strict adherence to this belief might result in failure to appreciate the substantial prevalence of cancer in younger patients. Of the 151 histologically proved cases encountered at the Yates Memorial Clinic, 6.6 per cent occurred in the third decade and 27.1 per cent in the fourth decade, plus one case of adenocarcinoma of the cervix in a woman 19 years of age. Thus, 34.4 per cent, or more than one-third of all

cases, were found in patients below the age of 40 years, an age at which many persons believe that the hazard of cancer begins. Of the 52 cases which occurred before 40 years of age, 24 were definitely invasive. Thus, approximately half of the cases in patients under 40 years of age had already progressed beyond the intra-epithelial stage when diagnosed.

"By way of contrast, it was found that only approximately one-fifth of the cases in patients over 40 years of age were in pre-invasive stages. This is considered significant because it indicates or suggests that invasive carcinoma of the cervix develops from a preexisting intra-epithelial or pre-invasive carcinoma. In succeeding decades the number of intra-epithelial carcinomas progressively diminishes. Between the ages of 60 and 70 there was only one such case in this series.

"The value of cytodiagnosis as a screening procedure is well illustrated by the number of instances in which no clinical evidence of cancer of the cervix was present. Of a total of 147 cases of squamous cell carcinoma, 42.8 per cent were detected, *primarily*, by smear examination. Contrary to what might be assumed these were not all pre-invasive carcinomas. Over 23 per cent were frankly invasive carcinomas which were clinically undetectable, and would have been missed completely in the absence of cytologic studies. It is impossible to emphasize too strongly how little correlation there frequently is between the clinical and the pathologic diagnosis."

Nothing has been said up to this point about false-negative smears; that is, vaginal and cervical smears rated as free of malignant cells in cases of patients who were found by other diagnostic methods to have carcinoma of the cervix. In nearly every case it was found that this was due to faulty technique in obtaining the smears.

In this series 3.6 per cent of the smears were regarded as so-called false-positive or, perhaps more accurately, they should be termed unconfirmed-positives. It is usually considered that the percentages of positive smears confirmed histologically constitute the specificity of this test. It should be pointed out, however, that the smear may be more correct than the biopsy, because the material in the smear may be more representative and may contain neoplastic cells from an area missed by the biopsy. The truth of this statement diminishes when a cold-knife-cone biopsy is performed or, better yet, when a fractional dilatation and curettage is done. Unfortunately, it is not within the scope of the time allotted for this presentation to outline the details of this last named technique.

For the sake of completeness, it is necessary that the Draghi detection tampon method for obtaining smears be mentioned. This method consists of the

placing of a specially prepared nylon covered tampon in the vagina for varying periods of time, after which it is removed, and a stamp smear made on a slide for cytologic study. This method has merit only so long as it is in the complete control of private practitioners and only so long as final diagnosis depends upon a thorough gynecologic examination and further histopathologic study. The inherent danger of a large segment of our female population having a false sense of security as the result of a mass screening program conducted by a governmental agency is quite apparent and needs no further elaboration.

It seems clear, from this review, that the private physician's office can serve as a practical cancer detection center for reaching larger and larger segments of our female population. By this channel the monumental work of Papanicolaou and Traut will bear fruit. Economy, efficiency, and accuracy depend largely upon the laboratory facilities which are available or which can be developed in a community. When cytologic screening spreads away from those physicians who have special training and interest, efficiency is somewhat reduced but, even so, the benefits in terms of unsuspected cancer-detections far outweigh the harm which has been observed. In a report by Martin et al. from San Diego County, California, of a five-year community study in which over 600 smear detections were reported, no lives were lost from inefficient use of smears. It is impossible to know how many lives were saved by 600 cervical cancer-detections, especially when 6 out of 7 were in the intra-epithelial stage with an unknown prognosis without treatment. But even if all of the intra-epithelial growths were disregarded, the value of detecting a large number of unsuspected early invasive cervical cancers cannot be questioned.

In conclusion the following significant facts should be emphasized:

1. Nearly one-fourth of the invasive and approximately three-fourths of the pre-invasive carcinomas of the cervix will not be recognized on vaginal inspection. Consequently, history and physical examination *only* are not reliable methods for the diagnosis of cervical carcinoma.

2. Routine Papanicolaou smears have been a most effective diagnostic aid in cancer-detection and have been credited with primary detection of 42.8 per cent of all cancers of the cervix at Yates Memorial Clinic.

3. The importance of the suspicious smear, 52.9 per cent of which proved to be biopsy positive, must not be overlooked.

4. Approximately one-third of the biopsy-positive cases of cervical carcinoma in one large series

occurred before the age of 40 years and almost one-half of these had already reached an invasive stage.

5. This disease is more an affliction of the younger age group than it has been generally thought to be.

6. The private physician's office remains the most practical cancer-detection center, *provided* private practitioners keep themselves well informed of the latest and most effective methods for diagnosis of cancer.

REFERENCES

American Cancer Society Bulletin, Cytology and Cancer of the Cervix.

Archer, Robert P.: The Papanicolaou Smear Technique to Detect Early Cancer in Cervix Uteri. A Report on its Use in General Practice, J. Indiana M. A. 50: 441, April 1957.

Bemforth, Joseph: The Cytological Diagnosis of Carcinoma of the Uterus, Practitioner 178: 282, March 1957.

Brunschwig, Alexander, M. D.: With Comments on Cytology of Tampon Smears by George N. Papanicolaou, M. D.: Detection of Endometrial Adenocarcinoma by Tampon-Smear Method, Cancer 10: 120, Jan.-Feb. 1957.

Dale, Esther H.; Brines, Osborne A.; Wilson, Gerald S., and Nelson, Harry M.: The Role of Exfoliative Cytology in the Diagnosis of Carcinoma of the Cervix Uteri, Am. J. Obst. & Gynec. 74: 25, July 1957.

Huey, Thomas W., Jr.; Kimmelstiel, Paul, and Pixley, Roland E.: Experiences with the Papanicolaou Smear, North Carolina M. J. 13: 574, October 1952.

Lee, W. Vernon: The Papanicolaou Procedure as an Aid in the Early Diagnosis of Cancer of the Cervix, Kentucky M. J. 54: 705-707, Aug. 1956.

Martin, Purvis L.; Higgins, Laurie W.; Slate, Thomas A., and DeSanto, Dominic: A Five-Year Community Study of Papanicolaou Screening for Cervical Cancer, West. J. Surg. 63: 223-231, May 1955.

Meigs, Joe V.; Graham, Ruth M.; Fremont-Smith, Maurice; Janzen, Lois T., and Nelson, Carey B.: II. The Value of the Vaginal Smear in the Diagnosis of Uterine Cancer. A Report of 1015 Cases. Surg., Gynec. and Obst. 81: 337, October 1945.

Nelson, Robert B.; Nicklas, Edward W., and Winship, Theodore: How Practical Is the Cervical Smear in the Diagnosis of Carcinoma? M. Ann. District of Columbia, 26: 171, April 1957.

Papanicolaou, George N.: Cytological Evaluation of Smears Prepared by the Tampon Method for the Detection of Carcinoma of the Uterine Cervix, Cancer 7: 1185, November 1954.

Riva, H. L.; Pickhardt, W. L., and Breen, J. L.: Carcinoma in Situ and the Role of Cytology in its Detection, Am. J. Obst. & Gynec. 74: 606, Sept. 1957.

Roberts, Chester L.: Vaginal Cytology. Results in 3,000 Consecutive Women with "Normal" Cervices, California Med. 86: 266, April 1957.

Stephenson, Richard B.: The Papanicolaou Smear, J. Maine M. A. 48: 147, May 1957.

Thornton, Madeline J.: Tampon Method for Mass Screening to Detect Carcinoma of Cervix Uteri, J. A. M. A. 159: 1177, November 19, 1955.

Weese, Winston H.: Three-Year Evaluation of Vaginal Papanicolaou Smears in Gynecological Office Practice, J. Louisiana State M. Soc. 109: 77, March 1957.

EXTRACELLULAR FLUID

LUTHER L. HILL, M. D.

Montgomery, Alabama

The great advances in our knowledge of body fluids during the last decade make a discussion of this subject seem worth while. I have chosen to discuss the material from a basic and practical point of view because of the composite nature of this audience.

Many of you will rarely be presented with a serious fluid and electrolyte problem. If and when such a time does arise, it will be more practical to employ the services of the expert rather than try to remember the intricate details you have heard at a medical lecture.

PHILOSOPHICAL CONSIDERATIONS

In the process of evolution, the first cell originated from the sea and had a composition which resembled the surrounding sea. The development of a cell membrane, however, made possible alterations within the cell and development into various structures with specialized functions. The original cells were, nevertheless, dependent upon the sur-

rounding sea water for nourishment and to take away the products of their metabolism.

When evolution progressed to the point where the cells were to leave their salt water environment, these cells carried with them a portion of the sea.

Down through the ages this fluid which surrounds the cells and nourishes and maintains their health has remained remarkably constant in composition and relative concentration. This fluid then is what we call the extracellular fluid. Figure 1 demonstrates the rather astounding similarity between the composition and relative concentrations of the sea water and the extracellular fluid.

PHYSIOLOGICAL CONSIDERATIONS

As can be seen in figure 2, the extracellular fluid consists of interstitial fluid and plasma. The interstitial fluid surrounds and bathes the individ-

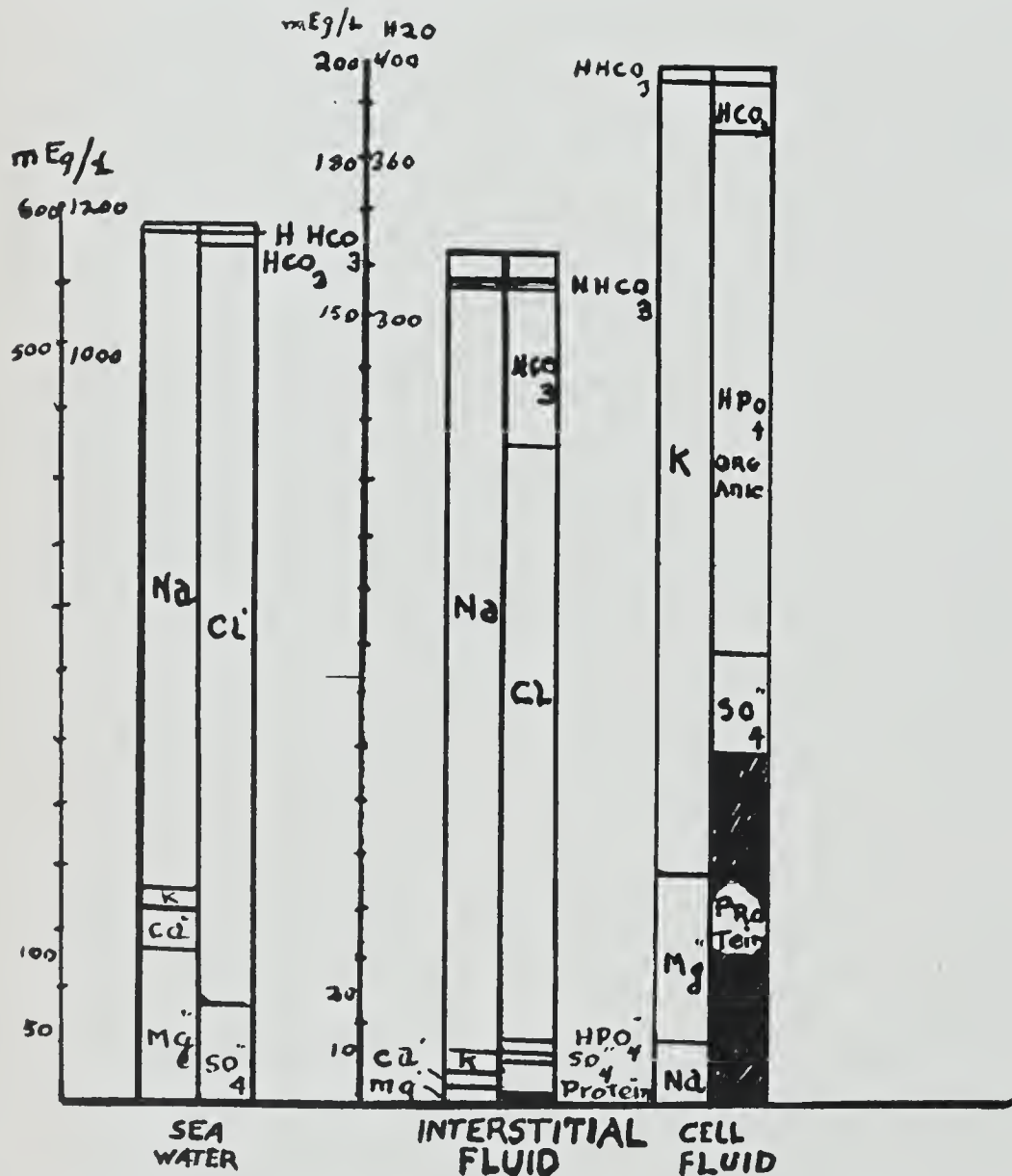


Fig. 1. This chart illustrates the close similarity in the composition and relative concentrations of sea water and interstitial fluid. The lack of similarity between the intracellular fluid and the sea water is also vividly shown. It is understandable that specialized function required of the cell would result in a specific composition. (Gamble.)

Read before the Association in annual session, Montgomery, April 18, 1958.

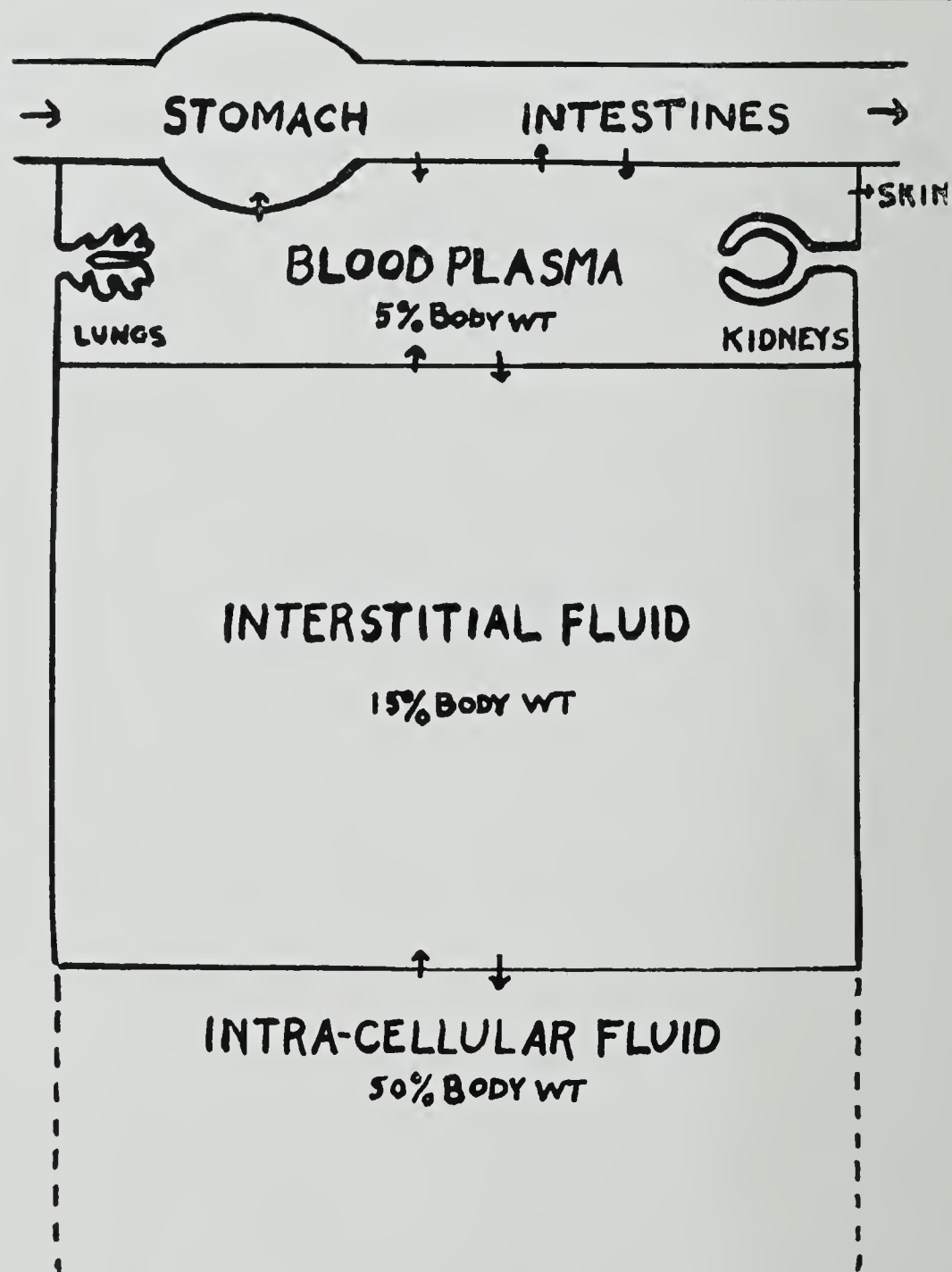


Fig. 2. This chart is a diagrammatic representation of the various body spaces. It demonstrates how the extracellular fluid through its plasma component is enabled to maintain its constant composition. The interstitial fluid by surrounding and bathing the cells has the function of transporting the nutrient and waste materials between the plasma and the cells. It also serves as a reserve of water and electrolytes. (Gamble.)

ual cells and transports water and electrolytes from the cells to the plasma and back again.

The plasma has the responsibility of maintaining the composition and concentration of the fluid. It does this by circulating through the kidneys, lungs, liver and intestines.

It is remarkable that such a small volume of plasma can do this job. The plasma constitutes 5% of the body weight and this amounts to only 2½ liters for a 110 lb. girl.

This same girl might secrete 6 to 8 liters of an electrolyte solution resembling plasma into her intestinal tract (as digestive juices) within 24 hours.

It is obvious that a maintenance of the plasma volume within relatively narrow limits is critical.

There are four possible derangements of the extracellular fluid as follows:

1. Alterations in concentration:
 - A. Increase,
 - B. Decrease.
2. Alterations in volume:
 - A. Increase,
 - B. Decrease.

An increase in concentration occurs in simple water deprivation, possibly aided by increase in water loss by sweating. The symptom is thirst and the treatment is to give water until thirst is relieved.

A decrease in concentration is usually iatrogenic. It occurs when water is given to a patient in amounts exceeding the need and the capacity to excrete it. This is most commonly seen when glucose and water is given in an effort to replace the gastrointestinal electrolyte and water solutions lost by vomiting and diarrhea.

Water intoxication can be produced if the error is persisted in. The obvious treatment is to stop giving the water and give electrolytes.

Changes in volume of extracellular fluid are by far the most important derangement. A discussion of certain physiological considerations is necessary to understand volume disturbances.

Figure 3 gives a diagrammatic representation of the body spaces. They can be compared to a container with partitions separating the different spaces. The partition between the plasma and the interstitial space is the capillary wall. The partition between the interstitial space and the intracellular space is the cell membrane.

The capillary wall passes water and electrolytes so readily that a change in the concentration or volume of one space is followed almost instantly by the same change in the other space. The cell membrane allows water to pass freely but electro-

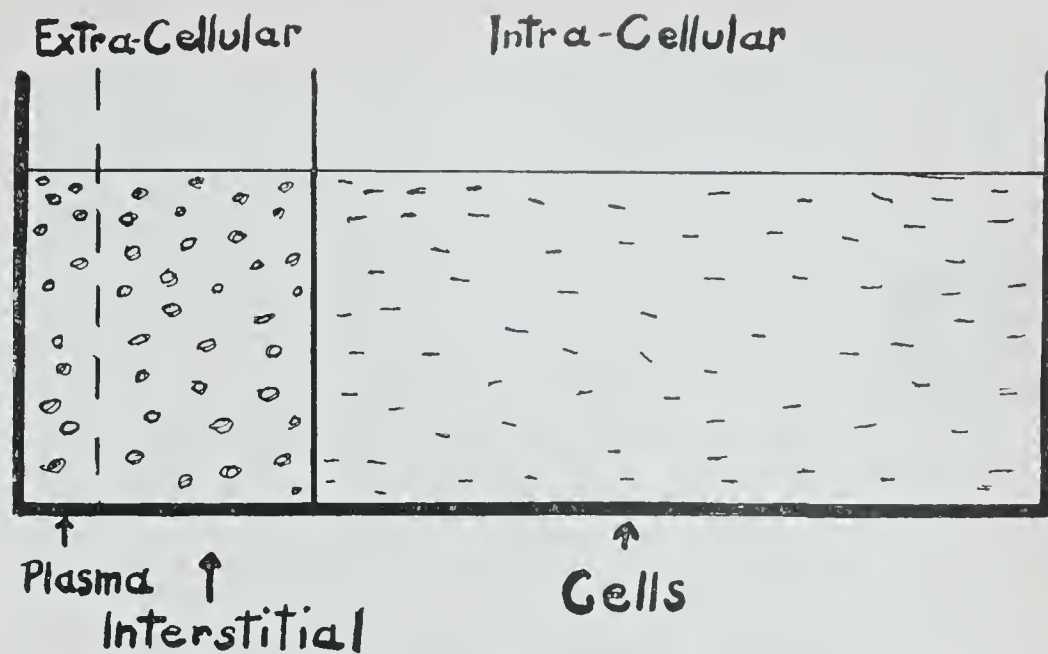


Fig. 3. This is a diagrammatic representation of the various body spaces. Their proportional size is illustrated. Water passes readily from one space to another. Electrolytes pass readily from the plasma to the interstitial spaces but the cell wall acts as a barrier that is crossed with difficulty.

lytes are held for a much greater length of time. There are few disturbances in one space that do not affect each of the others, but the extracellular space can be considered as a functional unit.

Figure 4 is a diagrammatic representation of what occurs in a patient with a diarrhea who loses, rather quickly, 4 liters of intestinal fluid. The loss, of course, is first from the plasma but it is

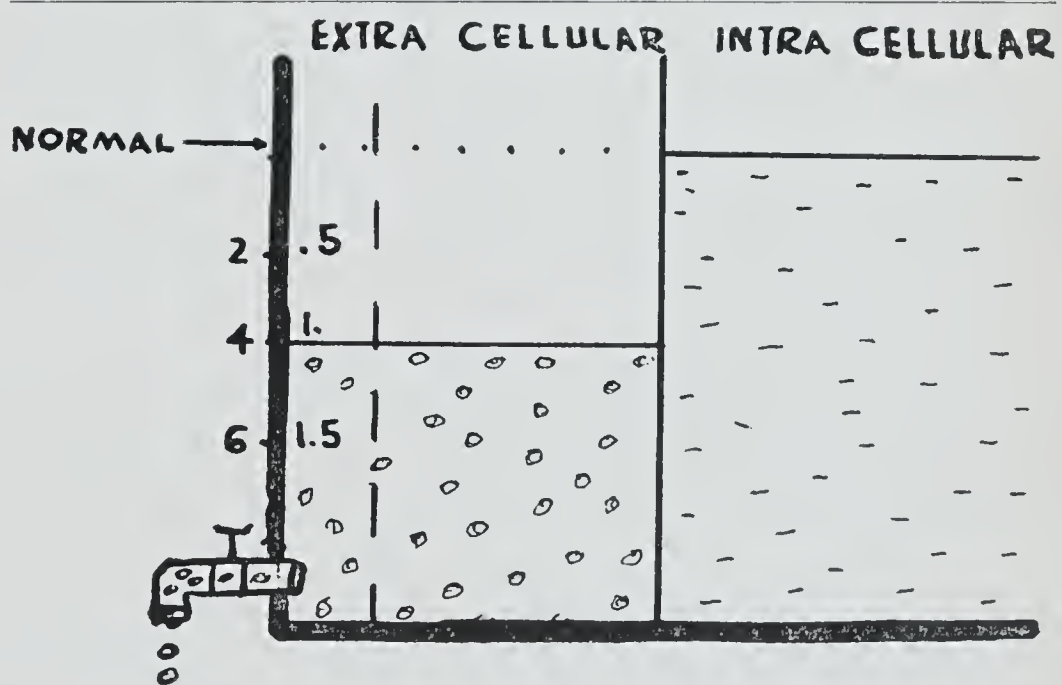


Fig. 4. The sudden loss of 4 liters of extracellular fluid is quickly adjusted between the plasma and the interstitial fluid. It would have to be because a 110 lb. patient would only have 2½ liters of plasma to begin with. A loss of 1 liter of plasma would put this patient's circulation in a critical state.

rapidly made up by the interstitial fluid. Since the interstitial space is 3 times the size of the plasma volume, the loss of 1 liter would decrease the plasma volume 250 cc. and the interstitial space 750 cc. This amount would make the patient a bit weak but the loss of 4 liters would mean the plasma volume would decrease 1 liter and such a patient would be quite sick in shock.

I do not think it is a coincidence that an individual can lose a pint of blood without too many

symptoms, but the sudden loss of a liter would be quite serious to most individuals. The loss of 4 liters of extracellular fluid into the intestinal tract would produce the same 1 liter decrease in blood volume—but a blood loss is sooner replaced—because the interstitial space can act as a reserve.

Figure 5 is a diagrammatic representation of an overfilling of the extracellular space which occurs when an excess of electrolyte solution is given—

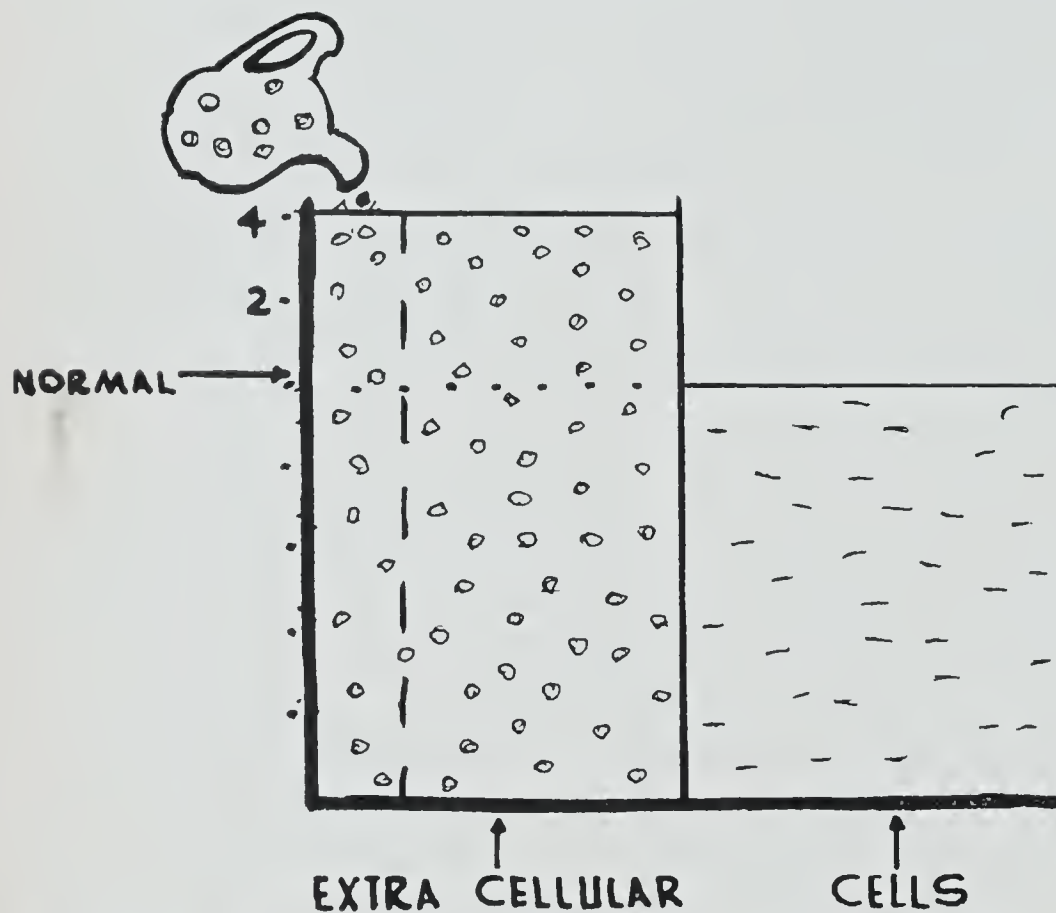


Fig. 5. A diagrammatic representation of an overfilling of the extracellular space. It is assumed that the pitcher contains an electrolyte solution with a concentration similar to that in the extra- and intracellular spaces. This diagram illustrates how the circulation can be overloaded by excessive administration of electrolyte solution.

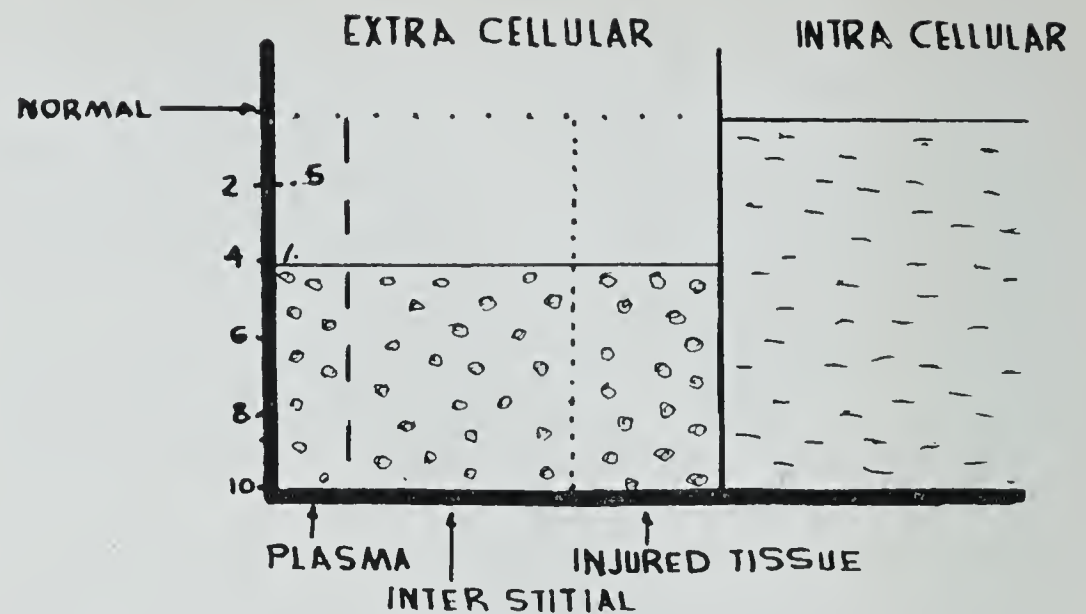
an amount exceeding the quantity that can be excreted in the time allotted. Heart failure is produced by overloading the vascular space in this manner.

Figure 6 is a diagrammatic representation of a distributional shift in the extracellular fluid into injured tissue. This occurs in burns, in crushing of the tissues, or in tissues injured by toxins. We have an effective decrease in the plasma volume which should be corrected. It is obvious that pressure dressings over the injured area will limit the amount of escaping fluid and hence the decrease in the blood volume.

PRACTICAL CONSIDERATIONS

The extracellular space then should be considered as a functional unit, as definite and unique perhaps as the nervous system or skeleton.

As an example, I would like to consider a 74-year old female who weighs 110 lbs. She has a small bowel obstruction of a week's duration—and she has been known to be a cardionephritic problem for many years. She has a marked peripheral



DISTRIBUTIONAL SHIFT

Fig. 6. A diagrammatic representation of a distributional shift of extracellular fluid into injured tissue. It is easy to see how the plasma volume can fall to a critical level and shock produced by this shift. The effect of pressure dressings in preventing this can be easily understood from this illustration.

circulatory collapse and will die a fluid and electrolyte death unless properly handled.

What shall we do? What fluid should she be given and how much? Should she be given any salt at all?

Consider first what to give. She has lost from her body into her intestinal tract an electrolyte solution which closely resembles plasma. Why not replace the electrolyte solution she has lost? Without any laboratory electrolyte determinations, a solution resembling plasma cannot help but improve her status (with the one exception of leaving out the potassium if her kidneys have failed).

Many liters of sodium chloride alone have been given but the balanced solutions are preferable (unless a chloride deficit has been produced by drinking a lot of water which is then vomited, carrying the excess of chloride in the stomach with it).

There are a number of solutions now available which closely simulate the electrolyte pattern of plasma.

TABLE 1

	NA	CL	K	CA	MG
Normal Human Plasma.....	140	103	5	5	
Normal Saline	154	154			
Cutter-Polysal (BES)	140	103	10	5	3
D. Baxter-Isolyte	140	103	10	5	3
Abbott Ionosol DCM.....	138	108	12	5	3
Mead No. 158 GP-Duodenal	140	103	10	5	3

How much of this electrolyte solution should we give? The correct amount would be to fill up the extracellular space but not overfill it. This would

restore the plasma volume and correct the circulatory failure.

Would this cause edema? Not any more than she had before she became acutely obstructed. The volume of the plasma does not bear exactly the same relation to the interstitial fluid that is represented in the illustrations. The protein in the plasma (which does not pass readily through the capillary wall) helps to hold water in the blood vessels. During a week of illness and starvation there would be some decrease in the plasma protein but not enough to make a large difference in the edema.

How will we know when the extracellular space is adequately filled? The signs and symptoms of extracellular fluid volume are mainly those of blood volume. They are:

1. Blood pressure,
2. Pulse rate,
3. Filling of peripheral veins,
4. Weakness,
5. Loss of skin elasticity.

In volume deficits the blood pressure is decreased—the systolic first, then the diastolic. This results in a decrease in the pulse pressure early. The difference in the standing and supine systolic pressures is often quite striking in volume deficits.

The pulse rate is increased in deficits and slow in volume excess.

The size and degree of distention of the veins in the back of the hand are excellent indications of the adequacy of the blood volume. When the patient is in a sitting position and the hand held by the side, veins should be prominent. As the hand is raised the veins will normally collapse when the hand reaches the level of the heart. If they should remain distended when the hand is held above the heart level, we may feel sure that the blood volume is above normal. I have found this simple test to be of great value.

Symptoms of weakness can readily be explained by the effect of inadequate circulation on the nervous system.

Inelasticity of the skin is found when the skin is pinched into folds and fails to level out immediately. This is also a valuable sign.

The extracellular space has been treated as a functional unit. In reality, though, the cells themselves participate in almost any changes in the body fluids or electrolytes. In the vast majority of disturbances, however, when proper attention is given the extracellular fluid, the body returns to health with more perfect adjustments made by the kidneys and lungs than we could consciously direct.

SUMMARY AND CONCLUSION

1. The extracellular fluid resembles sea water very closely in composition and relative concentration.

2. A reasonably constant concentration and volume of extracellular fluid is necessary to bathe the cells and maintain health.

3. The extracellular fluid consists of blood plasma and interstitial fluid.

4. The plasma has the responsibility of maintaining the composition, concentration and volume of extracellular fluid.

5. The interstitial fluid is in intimate contact with the cells.

6. The volume of extracellular fluid can be appraised by estimating the volume of circulating blood.

7. In most instances, deficits of extracellular fluid should be made up by giving electrolyte solutions similar to plasma.

8. The extracellular fluid should be considered a functional unit, as unique in its own way as the nervous system or the skeleton.

REFERENCES

Bland, John H.: *Disturbances of Body Fluids*, ed. 2, Philadelphia, 1956, W. B. Saunders Company.

Elkinton, J. R., and Danowski, T. S.: *The Body Fluids*, Baltimore, Williams and Wilkins Co., 1955.

Gamble, James L.: *Extracellular Fluid*, Cambridge, Mass., 1953, Harvard University Press.

Hardy, James D.: *Fluid Therapy*, Philadelphia, 1954, Lea and Febiger.

Moyer, Carl A.: *Fluid Balance*, Chicago, 1952, The Year Book Publishers, Inc.

Shoe Dermatitis—A chromium salt used to tan leather has been found to cause skin eruptions on the feet, according to a Boston dermatologist.

The material has long been suspected of causing dermatitis, but it has never—until recently—been available for use in patch-testing which would prove its effect on the skin, Dr. George E. Morris said.

His is the first report of a study in which persons suspected of having shoe dermatitis have actually been tested with the chrome salt found in their shoes, he said in the Nov. *Archives of Dermatology*.

He found four patients with shoe leather dermatitis who reacted positively to the chrome salt. In addition, two leather workers who previously had "chrome dermatitis" reacted positively to the material.

The chrome salt joins a number of other substances found in shoes that cause dermatitis. They include dyes and other chemicals in the leather, the material used in the box toes of shoes, and rubber adhesives.

The chrome salt is leached from shoe leather by an acid in perspiration and deposited on the skin, Dr. Morris said. He noted that it has long been believed that the chrome salt could not be separated from the leather.

The dermatitis will clear if the patient stops wearing leather shoes.

DIAGNOSIS AND TREATMENT OF INTRAORAL CANCER

PART II

JAMES W. HENDRICK, M. D.

Tuscaloosa, Alabama

Treatment of Carcinoma of the Tongue and Floor of the Mouth. Carcinoma of the tongue and floor of the mouth, with the exception of a small group of well differentiated carcinomas occurring on the tip and anterior third of the tongue, is one of the most difficult groups of cancers to control.^{1,2,3} Small carcinomas of the tip or anterior third of the tongue do not infiltrate the submucosa or muscular coat early and, therefore, good results are obtained by the use of a V-shape surgical excision; the wound is reconstructed with good cosmetic and functional results. Large carcinomas involving the middle or posterior third of the tongue and/or floor of the mouth require more radical treatment. If permitted to grow, they infiltrate the tissues of the cheek, resulting in a fistula (Fig. 1). Others first manifest themselves by enlargement of the lymph nodes in the drainage area of the neck (Fig. 2). Ulcerated carcinomas of the tongue and floor of the mouth may erroneously be treated as syphilitic ulcers (Fig. 3).

osteum and, in some cases, the thickness of the mandible. The mucous membrane can be advanced from the surrounding areas if the defect is small; otherwise, a split thickness skin graft is used to cover the defect with satisfactory results.

Formerly carcinoma of the tongue and floor of the mouth was treated by some with implantation of radium needles, telerradium applied externally, intraoral molds containing radium tubes, or one of these modalities in conjunction with roentgen therapy.^{1,2,3,12} These methods were used in an attempt to eradicate the primary cancer and prophylactically sterilize the lymph nodes in the drainage area or destroy metastasis, when present. Long term follow up examinations of patients treated by these methods has revealed that permanent changes, i. e., a breakdown of tissues with formation of a painful ulcer, obliterating endarteritis or sclerosis, occurred in surrounding structures in a high percentage of patients when sufficient quantities of irradiation in any of these forms were



Fig. 1. Extensive carcinoma of the tongue involving the floor of the mouth and extending through the thickness of the cheek, resulting in a fistula in the region of



the left submaxillary gland; the fistula was the presenting symptom.

Early cancers of the anterior third of the floor of the mouth or lower gingiva just beneath the tip of the tongue are removed with electrosurgery. The incision is extended well around and beneath the tumor to include the mucous membrane, peri-

used to eradicate squamous cell carcinoma or adenocarcinoma. The constant presence of bacterial flora and pooling of saliva in the oral cavity prohibit healing of ulcerations. Not infrequently, the ulcer extends to deeper structures of the floor of the mouth and tongue and in some cases erodes the lingual vein and artery, resulting in severe hemorrhage. The use of radium needles, which puncture the tissues of the tongue and floor of the

Read before the Association in annual session, Montgomery, April 17, 1958. Part I appeared in the November 1958 issue of the Journal.

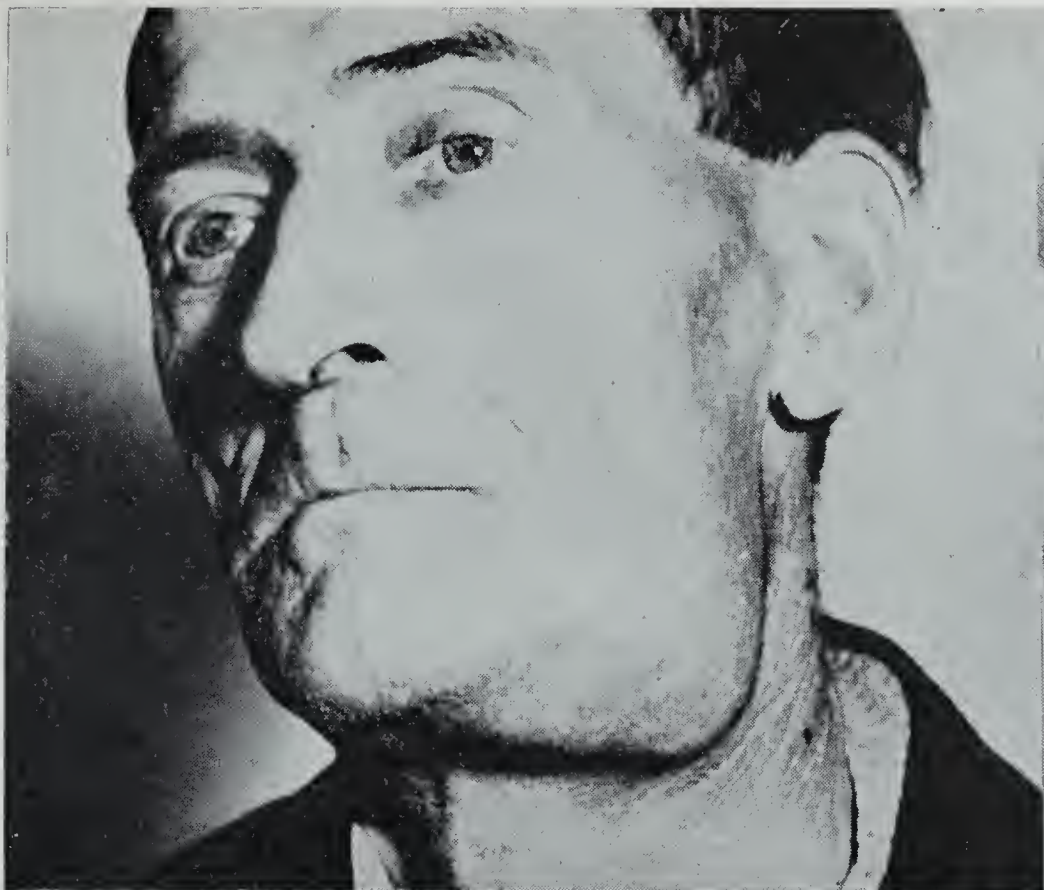


Fig. 2. This patient was referred because of a large tumor mass in the left submaxillary gland area result-



Fig. 3. Squamous cell carcinoma, lateral surface, middle third of the tongue and extending onto the floor of the mouth; the patient was a 30-year old female, and had been treated elsewhere for syphilitic ulcer for a period of four months.

mouth, serves to invite infection in the region of the submaxillary gland, often resulting in suppuration and edema which may simulate metastasis. Also metastasis may be present, making a differential diagnosis difficult. Infection increases the virulence of cancer in the lymph nodes.⁷

It is my policy to administer preoperative roentgen therapy to the primary lesion in extensive cancers of the tongue and floor of the mouth, followed in four to six weeks by radical neck dissection, hemimandibulectomy and hemiglossectomy, *en bloc* (Fig. 4).^{6,7,16} Irradiation, alone, does not control the primary cancer and metastasis and it must be remembered that the lymph nodes in the drainage area become involved early.

This operative procedure, which has been designated the "Composite Operation," permits an

ing from extensive carcinoma of the base of the tongue and extending onto the tonsil pillar.

anatomical visualization of important blood vessels and nerves, as well as removal of the primary site of the malignancy, its avenue of extension, and all lymph node bearing tissue, *en bloc* (Figs. 5, 6, 7).^{13,15,16} The Composite Operation is considered an important modality of therapy because it permits salvage of a substantial group of patients with cancer in the middle and posterior third of the tongue, floor of the mouth, faucial pillars, tonsils and anterior wall of the pharynx (Fig. 8).

Good oral hygiene is necessary before preoperative irradiation therapy is begun; when infected teeth are not removed before the therapy is administered, osteomyelitis frequently results.¹² Irradiation therapy, tumor dose 5000 roentgens, 400-500 roentgens administered three times a week, serves to shrink, devitalize and destroy the primary cancer sufficiently to permit its safe surgical removal with little likelihood of disseminating cancer cells during the procedure. Also, it seals off lymphatic channels after a period of a few days, decreasing the likelihood of recurrence as well as reducing the size of the involved lymph nodes in the drainage area, if present. In a few patients with large lesions located on the posterior third of the tongue and floor of the mouth or faucial pillar, trismus is present which prohibits the patient opening his mouth sufficiently to administer treatment with an intraoral cone. Such cancers may require radon seed implantation with additional extraoral roentgen therapy through one or more ports.¹⁶

The term "radical neck dissection" used here includes removal of all structures involved in the neck, including the internal and external jugular veins and their tributaries, the sternomastoid and omohyoid muscles, the accessory nerve and all

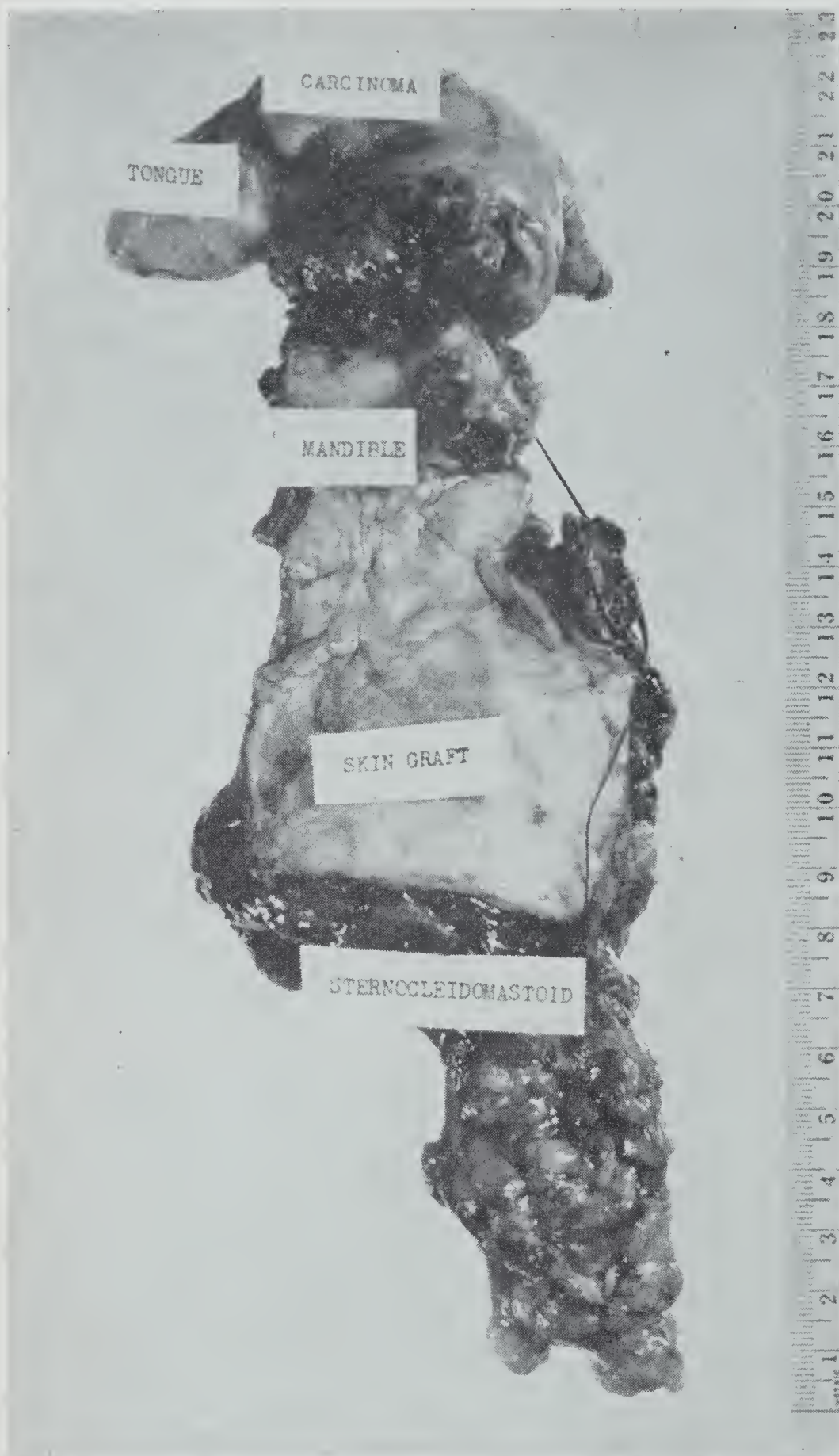


Fig. 4. Specimen from the patient shown in Fig. 2, which includes the carcinoma on the lateral half of the tongue, a section of mandible, and all lymph node bearing tissue on the involved side of the neck.

lymphoid and adipose tissue from the clavicle below to the base of the skull above and from the trapezius muscle posteriorly to the midline anteriorly.¹⁶ Only the vagus, lingual, hypoglossal and phrenic nerves and common carotid artery remain. The external carotid artery is ligated during the neck dissection. In the few cases in which a bilateral neck dissection is necessary, the operative procedures are spaced at intervals from four to six weeks apart. I have observed no vascular changes or vascular complications or disturbance of intracranial pressure from this procedure.

Endotracheal anesthesia is essential in this procedure. A tracheostomy is performed at the beginning of the operation to reduce postoperative mortality and morbidity. The use of Pentothal sodium intravenously, nitrous oxide and oxygen,

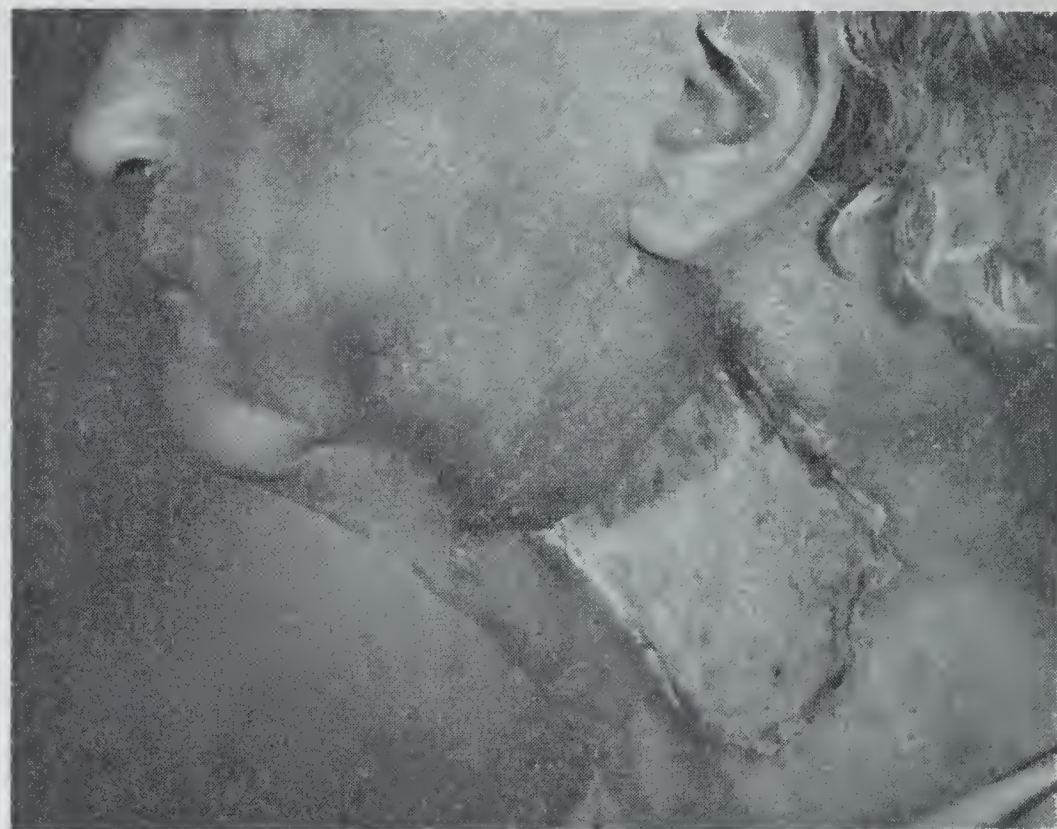


Fig. 5. Technique of Composite Operation: The skin is opened down to the platysma muscle and skin flaps are dissected back on all sides. A split thickness graft is applied to the under surface of the upper skin flap to form the floor of the mouth.

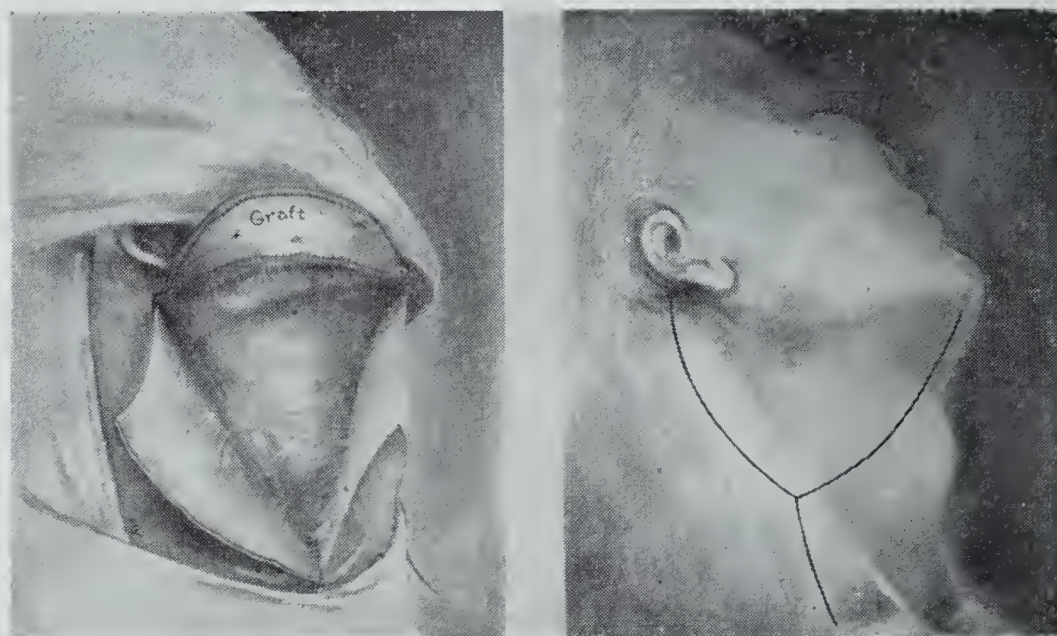


Fig. 6. A radical neck dissection begins with severance of the sternomastoid muscle from the clavicle and ligation and transection of the internal jugular vein at its lowest point in the neck. All lymph node bearing tissue is removed from the clavicle below to the base of the skull above and from the midline in front to the trapezius muscle posteriorly, including the internal jugular vein and its tributaries. (Courtesy of Ward and Hendrick, *Tumors of the Head and Neck*, Williams and Wilkins Company.)

with other medical preparations, permits the use of electrosurgery for desiccation and coagulation. The details of the operative technique have been presented in previous communications.^{6,16}

Contraindications to the Composite Operation. There are contraindications to the Composite Operation which are: (1) small, well differentiated carcinomas on the tip or anterior third of the tongue or floor of the mouth that can be safely removed with a V-shape excision; (2) early carcinomas of low histological grade without palpable lymph nodes in the drainage area which respond to roentgen therapy; (3) carcinomas in patients who refuse adequate surgical removal of their

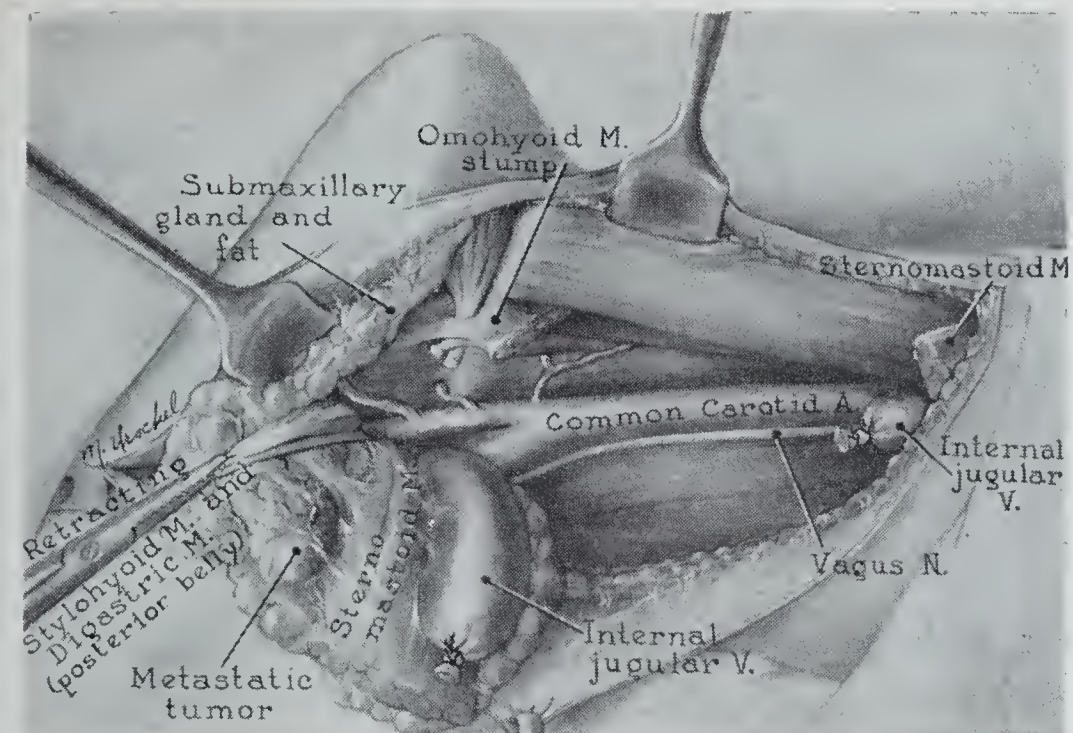


Fig. 7. Composite Operation has been completed. The external carotid artery has been ligated; all lymph node bearing tissue in the involved side of the neck has been removed, along with a section of the mandible, approximately one-half of the tongue, *en bloc*. (Courtesy of Ward and Hendrick, *Tumors of the Head and Neck*, Williams and Wilkins Company.)

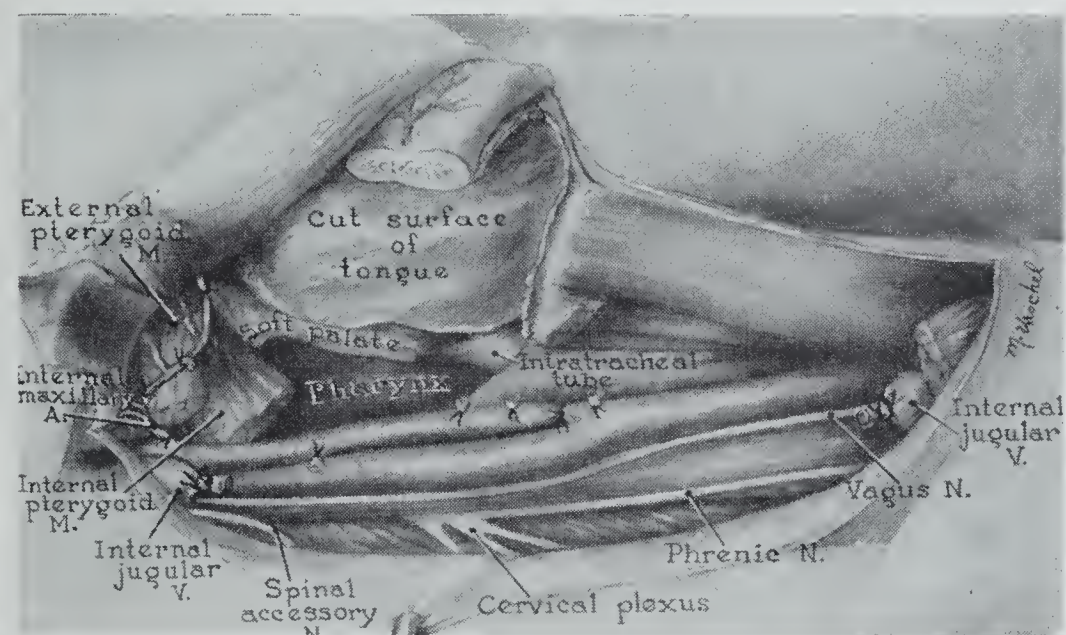


Fig. 8. Patient shown in Fig. 1, six months following Composite Operation for cancer of the tongue and floor of the mouth. A large segment of involved skin was removed and the resulting defect was covered with a pedicle graft. There has been no recurrence of the malignancy in ten years and the patient returned to his occupation as a clergyman. (Courtesy of Ward and Hendrick, *Tumors of the Head and Neck*, Williams and Wilkins Company.)

cancer or those cancers occurring in debilitated patients who are poor operative risks; (4) cancers of the tongue that extend past the midline or those in which the tumor is frozen to the submandibular area; and (5) carcinomas in patients with metastasis below the clavicle.⁶

At the 1958 meeting of the Society of Head and Neck Surgeons, Ward and associates from Johns Hopkins Hospital reported some five hundred patients with cancer of the tongue and floor of the mouth who had been treated with preoperative irradiation therapy followed by the Composite Operation. Their mortality rate was less than three per cent and five year nonrecurrence rate of 65 per cent. These statistics included all comers

during the period of study and did not represent just individually selected cases.

SUMMARY

In general, the prognosis of malignant intraoral tumors depends on early diagnosis, extent of the tumor, its histological grade, the presence or absence of metastasis, and how adequately the cancer is treated with irradiation therapy, electrosurgery, surgery, or a combination of these modalities.

There is a definite relationship between malignant disease of the oral cavity and oral sepsis, biochemical or physical trauma resulting from ill fitting dentures, rough or ragged teeth or a rim of tartar around the gums, tobacco, especially snuff and chewing tobacco, syphilis or benign lesions such as broad base papilloma and chronic leukoplakia.

The early production of cervical metastasis is one common characteristic of all intraoral cancers. Most of these cancers are disseminated by lymphatic emboli and not by the blood stream. It is essential, in order to effect a cure of patients with intraoral cancer, that a careful survey be made to determine if there is clinical evidence of involvement of the lymph nodes in the drainage area.

Treatment of these malignancies is planned to destroy the tumor and institute measures necessary to rehabilitate the patient. Justification for enlarging the scope of treatment to include resection of the superior maxilla and, in some patients, exenteration of the orbit, or radical neck dissection, hemimandibulectomy and hemiglossectomy, is based on fundamental anatomical, pathological and biological surgical principles. A substantial five-year nonrecurrence rate has been obtained by the use of the modalities of therapy outlined here.

REFERENCES

1. Baud, J.: End Results of Radium Therapy in Cancer of the Tongue, *Am. J. Roentgenol.* 63: 701, 1950.
2. Berven, J. B., and Haffner, H.: Lesions of the Tongue: Collective Review. *Internat. Abstr. Surg.* 69: 119, in *Surg., Gynec. & Obst.* (Aug.) 1939.
3. Cade, S.: Treatment of Cancer of the Tongue, *Am. J. Roentgenol.* 63: 716, 1950.
4. Carr, M. W.: Squamous Cell Carcinoma of the Tongue as a Sequel to Leukoplakia, *J. Oral Surg.* 6: 78, 1948.
5. Edgerton, M. T.: Replacement of the Lining to Oral Cavity Following Surgery, *Cancer* 4: 110, 1951.
6. Hendrick, James W.: Treatment of Carcinoma of the Tongue and Floor of the Mouth, *Amer. Surg.* 18: 1092, 1952.
7. Hendrick, James W., and Ward, Grant E.: Treatment of Intraoral Cancer, *J. A. M. A.* 150: 1099, 1952.
8. Hendrick, James W.: Treatment of Malignancy of the Buccal Mucous Membrane, Gingiva, Soft and Hard Palate, *Ann. Otol., Rhinol. and Laryng.* 61: 1094, 1952.
9. Hendrick, James W.: Treatment of Cancer of the

Nasal Cavity and Paranasal Sinuses, Surgery 102: 322, 1956.

10. Hendrick, James W., and Ward, Grant E.: Treatment of Cancer of the Lip, J. Internat. Coll. Surgeons 15: 7, 1951.

11. Hendrick, James W.; Ward, G. E., and Lacy, M. M.: Salivary Tissue Neoplasms, Am. J. Surg. 81: 373, 1951.

12. Martin, H. E.; Munster, H., and Sugarbaker, E. L.: Cancer of the Tongue, Arch. Surg. 41: 888, 1940.

13. Slaughter, D. P.: Neck Dissection, Indications and Technics, S. Clin. North America 26: 102, 1946.

14. Simmons, C. C.: Metastases from Intraoral Cancer, Am. J. Roentgenol. 26: 5, 1931.

15. Sugarbaker, E. D., and Gilford, J.: Combined Jaw Resection and Neck Dissection for Metastatic Carcinoma of Cervical Lymph Nodes, Secondly Involving Mandible, Surg., Gynec. & Obst. 83: 767, 1946.

16. Ward, Grant E., and Hendrick, James W.: Tumors of the Head and Neck, Baltimore, Williams and Wilkins Company, 1950.

17. Ward, Grant E., and Hendrick, James W.: Tumors of the Jaws, J. Internat. Coll. Surgeons 15: 443, 1951.

DISSECTING ANEURISM OF THE AORTA

A REVIEW

DONALD C. HARRISON, M. D.

Boston, Mass.

INTRODUCTION

This paper is not an attempt to review the world literature on dissecting aneurisms but represents an attempt to correlate the more recent data published on the subject. The pathologic physiology, as it is related to the clinical picture, will be discussed in detail and the more recent trends in surgical treatment will be summarized. Controversial issues will be presented but no attempt will be made to assess the validity of conclusions. The paper is intended to be a general review but to pinpoint the more recent advances in the field.

Dissecting aneurism of the aorta is a splitting of the wall of the artery by hemorrhage into the media of the wall starting from a tear into the intima or from rupture of vasa vasorum.¹

Pathologically dissecting aneurisms have been recognized for many years but only recently have assumed clinical importance. They were first accurately described by Morgagni in 1708. The first case description was of an ulceration in the wall of the aorta about two inches above the aortic valve which extended into sinuses and finally drained into the pericardium after penetrating obliquely through the aortic wall.² Nicholls later described the necropsy of King George II, who had a demonstrated dissecting aneurism, and postulated the etiology to be increased intravascular pressure.

The term dissecting aneurism was introduced by

Laennec in 1819, and Shehelton reported the first healed dissecting aneurism with a double barrelled aorta. The first antemortem diagnosis was not made until 1856, and in 1933 there were only 33 recorded correct clinical diagnoses. In the past decade, David McPeak, Visvas-Salas and White reported a correct antemortem diagnosis in 50% of the cases.² Other series vary from 27% to 60% correct clinical diagnosis.

It is now recognized that the term dissecting aneurism is an inaccurate term but is so deeply implanted in medical literature that it will likely remain. A more descriptive and accurate term is dissecting hematoma with progressive splitting of the medial layer.³

TYPES AND INVOLVEMENT

The types are distinguished on the basis of the anatomic location of the intimal tear and the extent of the medial laceration. The primary intimal tear was in the ascending aorta in 50% of the cases, in the arch in 30% of the cases, and the descending thoracic aorta in 20% of the cases. The dissection involved the ascending aorta in 70%, the arch in 90%, and the descending thoracic and the descending thoracic and abdominal aorta in 80% of the cases. The above figures are based on 40 cases studied at necropsy by Kirkpatrick⁴ at the Mayo Clinic. In 22 of the cases the orifice of the coronaries was affected four times, the innominate five times, left carotid six times, left subclavian eight times, celiac axis and superior mesenteric two times each, the left renal nine times, right renal two times, left iliac twelve times, and the right iliac nine times.

Submitted for publication May 27, 1958 while the author was a senior medical student at the Medical College of Alabama. He is now an intern at Peter Bent Brigham Hospital, 721 Huntington Avenue, Boston.

1. Pyle, D. A.: Dissecting Aneurisms of the Aorta, Post-Grad. M. J. 32: 7-13.

2. Creech, O., Jr.; DeBakey, M. E., and Cooley, D. A.: Diagnosis and Treatment of Dissecting Aneurisms of the Aorta, GP XIV: 125, 1956.

3. Burchell, H. B.: Aortic Dissection (Dissecting Hematoma; Dissecting Aneurism of the Aorta), Circulation XII: 1068-84 (1955).

4. Kirkpatrick, N.: Dissecting Aneurism of the Aorta, Graduate School, University of Minnesota (1949).

Multiple dissections have been reported. In a review, Sherman⁵ reported multiple dissections in five of 300 cases of dissecting aneurisms. An interesting report was recently made of a 68-year old male having six distinct dissecting aneurisms.⁶ He survived the first five such episodes but died of hemopericardium after the sixth dissection.

INCIDENCE

Various reports of the incidence of dissecting aneurisms based on autopsy study are from 0.1% to 1%. A recent study by Teare, who reviewed 32,000 coroners' cases, found dissecting aneurisms in 451 cases, an incidence of one in 70 or 1.4%. It is difficult to obtain an acceptable figure from the data now available.

The majority of cases occur between the ages of forty and seventy years but reports are in the literature of dissection occurring in all decades through the tenth. There has been a significant number of cases reported before age 40 years. Schnitker and Bayer⁷ reported 24% of 580 cases of dissecting aneurisms occurred before age 40 years; 49 of 141 of these cases were females and 50% of these were pregnant at the time of dissection. The dissection occurred prior to labor in most cases. These authors point out that this incidence in this age group is considerably in excess of other serious vascular accidents and that the number of women involved is extremely high.

These extremely high figures for young ages were confirmed by Gore and Seiwert⁸ who reviewed 85 cases of fatal dissecting aneurisms from the files of the Armed Forces Institute of Pathology and found 38% had occurred in patients before the age of 40 years.

In general, males are affected twice as commonly as females but in the older age group females are affected proportionately more. Dissecting aneurisms accounted for 12% of 369 cases of aortic aneurisms of all types studied at the University of Texas. The percentage of dissecting aneurisms as compared to all aortic aneurisms has increased from 2% to 22% since 1900.⁹

5. Dissecting Aneurisms, Medical Research Council, Special Report, Series No. 193, London, His Majesty's Stationary Office (1934).

6. Bellomy, B. B.: Multiple Dissecting Aneurisms of the Aorta, *Arch. Path.* 62: 14-16.

7. Schnitker, M. A., and Bayer, C. A.: Dissecting Aneurism of the Aorta in Younger Individuals, Particularly in Association with Pregnancy, with Report of a Case, *Ann. Int. Med.* 20: 486-511 (1944).

8. Gore, I., and Seiwert, V. J.: Dissecting Aneurism of the Aorta; Pathologic Aspects, An Analysis of 85 Fatal Cases, *Arch. Path.* 53: 121-141 (1952).

9. Fisher, H. W.: Dissecting Aneurism of the Aorta, *Med. Times*, 85: 530-40.

The underlying pathologic lesion in dissecting aneurism appears to be the degeneration of the structural elements of the medial coat of the aorta. The media is the principal supporting structure of the vessel. In dissecting aneurism the degenerative process usually appears as a form of cystic necrosis which is unrelated to other diseases of the aorta.

There are two accepted theories as to the mechanism of aortic dissection. It is generally thought that there is hemorrhage from the vasa vasorum into the medial layer which has been weakened by degenerative changes. The hemorrhage breaks through the media and intima, exposing the media to intra-aortic pressure and allowing aortic blood to dissect along the weakened media, forming a hematoma. The dissection ends by rupture into the tissues or spaces surrounding the aorta, by rupture back into the lumen of the aorta, or by ending in the wall without rupture. This hypothesis is supported by cases in which no intimal tears can be found and thus no intra-aortic pressure was exposed to the media. Incomplete rupture of the wall has been thought to be explained by vasa vasorum hemorrhage into the media breaking through the intima and no further dissection taking place or as representing depression of intact intima into degenerated cystic medial space.⁹

An alternate hypothesis is that the dissection begins as a transverse tear in the intima which progresses to the media, and further dissection is the result of intra-aortic pressure. These initial intimal tears are usually just above the aortic valve or in the descending thoracic aorta near the origin of the left subclavian artery.²

These two theories differ only in the initial event. Once dissection has started the blood tunnels its way along the weakened media, usually in a centrifugal fashion involving a portion or all of the circumference of the aorta. The dissection shears off branches of the aorta as they are encountered or may extend along these branches for variable distances.

All cases of medial degeneration in the aorta do not lead to dissecting aneurism. In a recent report, Gore and Seiwert⁸ attempt to explain why medial degeneration leads to dissection. Degeneration of the muscular or elastic elements of the media is associated with an inadequate reparative reaction, characterized by an increase in vasa vasorum, a mild inflammatory infiltration, and appearance of variable quantities of myxomatous tissue. The vasa are thin walled and poorly supported by the weakened media and are extremely vulnerable to break down. When break down occurs this initiates dissecting aneurism.

Bauer and Hirsch¹⁰ believe that spontaneous cleavage may be caused by the combined effects of torsion and distention of the aortic arch with pulsations of blood, and by differences in the elasticity between the outer fibrous adventitia and the inner elastic media tissue.

ETIOLOGY AND PATHOLOGY

The question of etiology of dissecting aneurism is in effect a discussion of the etiology of medial degeneration of the aorta. The etiology has not been definitely defined but several theories and a number of related concepts will be discussed.

Schlichter, Amromin and Solway¹¹ have implicated ischemia of the media of the aorta as the primary factor in the production of medionecrosis. They believe the following factors, either singly or in combination, are capable of bringing about medionecrosis and dissection: obstructive or occlusive disease of the vasa vasorum, diminished oxygen saturation of the blood, severe anemia, congenital abnormalities in distribution of vasa vasorum or paucity of collateral circulation through the adventitia, such as in aortic isthmus stenosis or coarctation of the aorta.

Hypertension has been implicated in the etiology of dissecting aneurism by many observers. Apparently in the younger patients there is less association with hypertension.⁸ Many patients have a history of the recent development of hypertension, and many of these are from patients classed as malignant hypertension.³ Ashworth and Haynes¹² have suggested that constriction of the vasa vasorum, associated with hypertensive states, might lead to ischemia, injury and degenerative changes. These authors consider these lesions separate from medionecrosis. There are several reports¹³ of dissecting aneurism occurring in patients being treated with methonium drugs. It is postulated that the dissection in this group of patients is related to the wide fluctuations in blood pressure putting stress on the wall of the aorta. Another theory as to the effect of the methonium drugs is that they exert a biochemical effect on the media of the aorta. Supporting this idea is the work of

Bachhuber¹⁴ who produced spontaneous aortic dissections in rats by feeding sweat-pea meal (beta amino proprionitril). Rats fed on aminonitriles have also developed aortic rupture.¹⁵

Gore⁸ has described two types of changes in the media of the aorta. In younger patients the medionecrosis was chiefly of the elastica and in the older patients the degeneration was chiefly of the smooth muscle. There was a great deal of overlapping in the type lesions seen. The mechanisms of the different types of degeneration are not known.

Pregnancy has been related to dissecting aneurism but as to how this state facilitates aortic medial degeneration is not known.

Aortic valvular diseases and coarctation of the aorta have been related to dissection. Ten per cent of all patients dying with untreated coarctation die of dissecting aneurism. Most authors feel there is no cause-and-effect relationship with aortic valvular disease.

Other conditions related to dissecting aneurism have been myxedema, syphilis, atherosclerosis, mycotic aneurisms, trauma and exertion. These relationships are not proven and at present are not generally accepted.

Marfan's syndrome has been related to dissecting aneurism, and there are several reports of these conditions occurring concomitantly. It is now generally accepted that Marfan's syndrome is associated with higher incidence of dissecting aneurism.¹⁶

There is one case report in the literature of dissecting aneurism secondary to tuberculous aortitis.¹⁷ This condition is rare since only 29 proven cases of tuberculous aortitis have been reported.

CLINICAL PICTURE

The clinical picture resulting from dissecting aneurism is extremely and characteristically protean. A wide variety of symptoms should be expected in view of the varied parts of the aorta that may be involved and the number of organs that bear the brunt of the secondary trauma from

10. Bauer, F. C., and Hirsch, E. F.: Spontaneous Longitudinal Cleavage of the Wall of the Aorta, *Arch. Path.* 59: 219-222 (1955).

11. Schlichter, J. G.; Amromin, G. D., and Solway, A. L.: Dissecting Aneurisms of the Aorta, *Arch. Int. Med.* 84: 558-568 (1949).

12. Ashworth, C. T., and Haynes, D. M.: Lesions in Elastic Arteries Associated with Hypertension, *Am. J. Path.* 24: 195-209 (1948).

13. Beaven, D. W., and Murphy, E. A.: Dissecting Aneurism During Methonium Therapy. A Report of Nine Cases Treated for Hypertension, *Brit. M. J.* 4958: 77-80 (1956).

14. Bachhuber, T. E., and Lalich, J. J.: Production of Dissecting Aneurisms in Rats Fed Lathyrus Odoratus, *Science* 120: 712 (1954).

15. Wawzonek, S.; Ponseti, I. V.; Shepard, R. S., and Wiedenmann, L. G.: Epiphyseal Plate Lesions; Degenerative Arthritis, and Dissecting Aneurism of the Aorta Produced by Aminonitriles, *Science* 121: 63 (1955).

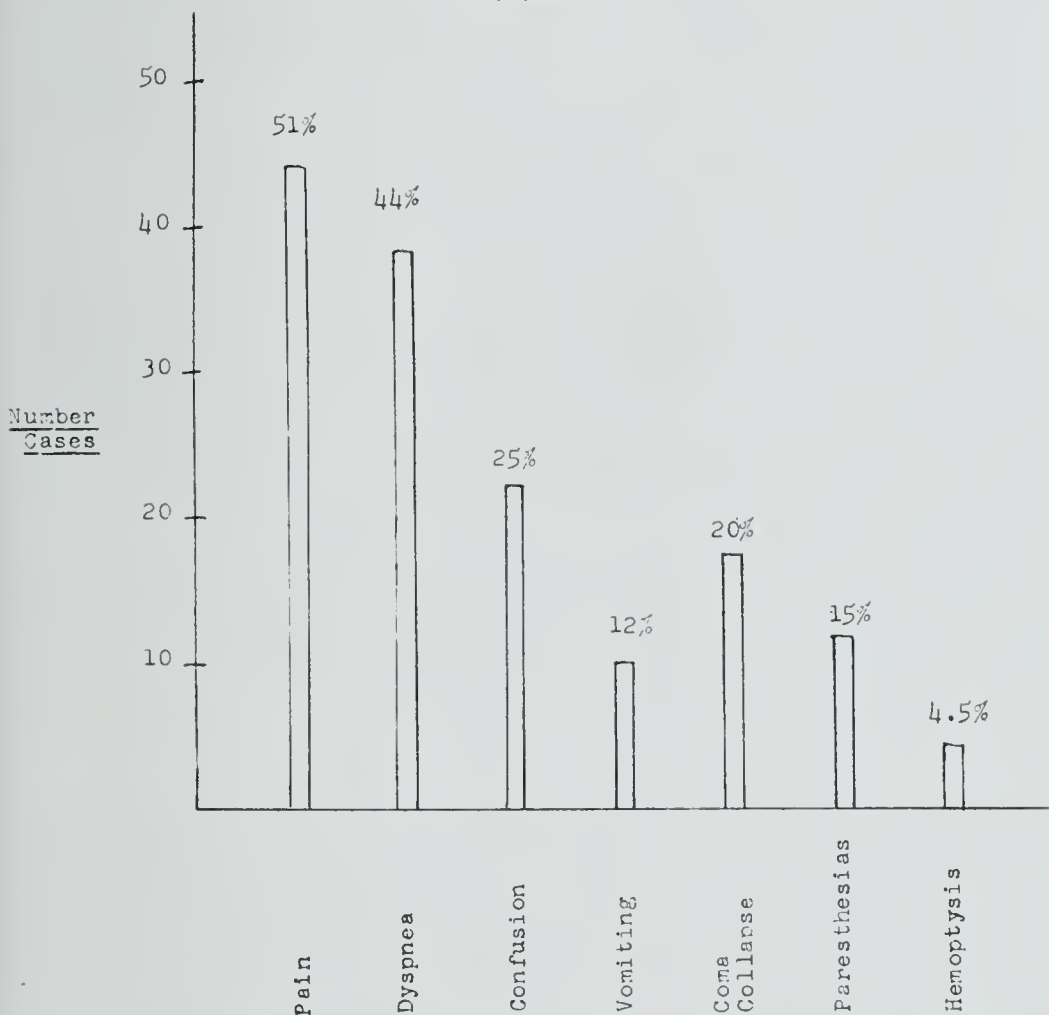
16. McKusick, V. A.: The Cardiovascular Aspects of Marfan's Syndrome, *Circulation* 11: 321 (1955).

17. Meehan, J. J.; Pastor, B. H., and Torre, A. V.: Dissecting Aneurism of the Aorta Secondary to Tuberculous Aortitis, *Circulation* 15: 615 (1957).

dissection. The clinical picture varies with time, and at times distinct phases are recognized—the phase of onset, phase of progression, phase of complications and phase of death. The entire process including all phases may last only a matter of minutes and these are the causes of sudden death as seen by the coroner.

Several reviews^{2,3,9,18,19} of the various manifestations have been published and Fig. I illustrates

FIGURE I



SYMPTOMS OF DISSECTING ANEURISM IN 86 TOTAL CASES

a summary of the symptoms observed by Baer¹⁹ in 86 cases.

In general, pain is the most common symptom. The characteristic history is of the sudden onset of a severe unrelenting pain which "marches" from one region to another, particularly from the thorax to the abdomen, to the back, to the extremities. The pain may be in the head and neck. Characteristically the pain does not radiate down the arms. The pain may be gradual in onset, mild, throbbing, oppressive, and vary widely in character in a few seconds. The pain is usually more severe than that of myocardial infarction and is seldom relieved by one injection of morphine. Pain is not always present, and in many cases the patients are confused and comatose and unable to give an adequate history. Pain is absent in those cases that develop cerebral arterial insufficiency early in the attack. In as many as 50% of the

cases, pain is either absent or only a slight feature of the syndrome.^{20,21}

Dyspnea is a prominent symptom and for this reason many other primary cardiac diagnoses are considered. The dyspnea may be a reflex phenomenon or may be due to fluid present in the chest. Hemothorax on the left should always raise the question of dissecting aneurism.¹⁹ Hemoptysis has been reported in a few cases but appears to be limited to those developing aortic insufficiency.²²

Neurologic symptoms are present in a large group of patients with dissecting aneurism. The neurologic lesions are due to shearing off of blood vessels which are branches of the aorta and this either causes ischemia of the brain, spinal cord or peripheral nerves or mechanical pressure on them. Central nervous system symptoms vary from localized cranial nerve damage to confusion and coma. Hemiplegia, psychosis and bizarre neurologic symptoms are seen occasionally. In view of the existing hypertension a number of false diagnoses have been made, including hypertensive encephalopathy, cerebral hemorrhage and thrombosis and subarachnoid hemorrhage.

Peripherally, paresthesias, areas of anesthesia, and areas of weakness or paralysis are seen commonly with dissecting aneurisms. The legs are the most common areas involved.

Abdominal symptoms are frequently seen and at times are the only symptoms. The pain may begin in the abdomen, and with extended dissection into the mesenteric arteries there may be hematemesis, melena or mesenteric infarction. Vomiting as an early manifestation is frequently seen.

Renal symptoms may be confused with renal calculus, renal infarction or uremia. In many cases an elevated blood urea nitrogen and microscopic hematuria develop.¹⁹ Acute renal shutdown has been noted when the dissection has extended to involve both renal arteries.

Pulsations of the sternoclavicular joints, singly or bilaterally, are reported as a sign of dissecting aneurism. This sign is due to the sudden fluctuating increase in superior mediastinal pressure resulting from acute expansion of the aorta.⁹

The chief physical findings on examination are: marked variations in blood pressure taken in the various extremities, absent or decreased peripheral

20. Wood, P.: Diseases of the Heart and Circulation, J. B. Lippincott Company, 1956, p. 924.

21. Levinson, D. C.; Edmeades, D. T., and Griffith, G. C.: Dissecting Aneurism of the Aorta: Its Clinical, Electrocardiographic and Laboratory Features, Circulation 1: 360-387 (1950).

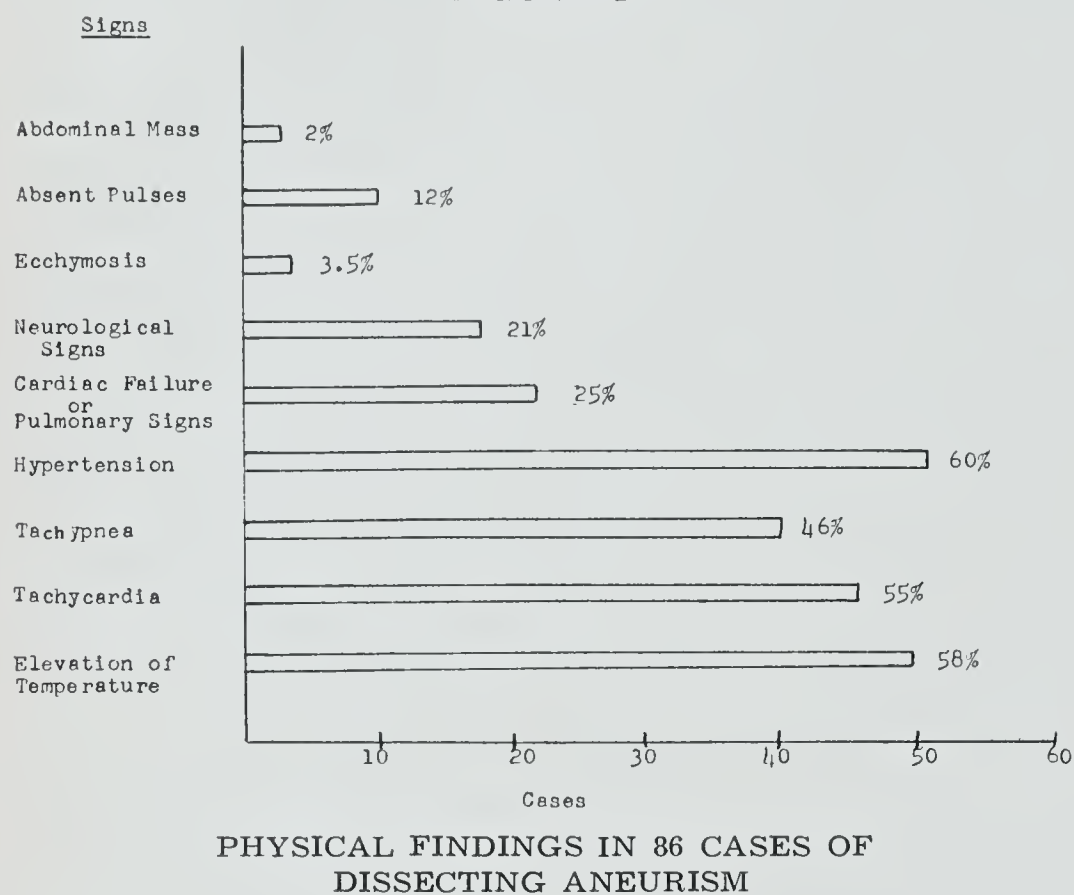
22. Evans, E., and Curry, R. W.: Dissecting Aneurism of the Aorta, South. M. J. 49: 238 (1956).

18. Scherbil, A. L.; Hazard, J. B., and DeWolfe, V. G.: Dissecting Aneurism of the Aorta, Cleveland Clin. Quart. 23: 231 (1956).

19. Baer, S.: Varied Manifestations of Dissecting Aneurism of the Aorta, J. A. M. A. 161: 689 (1956).

pulses in some area of the body, hypertension, fever, tachycardia, and abdominal mass, pulsation of the sternoclavicular joints, a friction rub over the heart, a diastolic murmur at the aortic area which comes and goes (this is likely functional and is produced by dilatation of the aortic ring), findings suggestive of fluid in the left chest, findings of shock, and many varied and complex

FIGURE II



neurologic signs. The signs are illustrated in Fig. II from Baer's work.

The x-ray and laboratory findings are very useful in making a correct diagnosis. The most constant radiologic picture is that of widening of the width of the supracardiac shadow, which is due to the widening of the aortic arch with dissection. In many cases the aortic shadow may appear widened and to have a double contour, with the central core representing the main stream of the aorta and the less radiopaque outer channel the path of dissection. The double contour of vessels which are involved in the dissection can be demonstrated at times. A left pleural effusion is demonstrated in those cases with leaking of the thoracic part of the aorta. Special studies are required at times to demonstrate the dissection. Angiocardiography is a very important study and the exact point of origin of the dissection can be demonstrated. Calcification of the intima of many aortas in these individuals make a double lumen very easy to demonstrate. Contrast studies such as barium in the gastro-intestinal tract can be used to outline the borders of the aorta more clearly.

Laboratory findings are occasionally useful. If the process is present several hours, there may be a polymorphonuclear leucocytosis. Severe anemia is present if hemorrhage has resulted. Microscopic hematuria and an elevated blood urea nitrogen

are seen in cases with renal artery involvement. Fever is present in most cases but is low grade. With hemorrhage from the dissection, ecchymosis may be seen over the lower thorax and the abdomen.

Electrocardiography is useful in many cases. The usual pattern is that of left ventricular hypertrophy and a left ventricular strain pattern. Pericarditis and myocardial ischemia may occur secondarily in dissecting aneurism and these patterns, if detected on electrocardiography, aid in ruling out myocardial infarction but the diagnosis is seldom made on the basis of findings on the electrocardiogram.²¹

DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS

The diagnosis of dissecting aneurism is quite obvious at times and extremely difficult to make at other times. The correct diagnosis antemortem is made in approximately 50% of the cases today. Appreciation of the clinical picture as described above will aid in making this diagnosis. A careful history, complete physical examination, carefully chosen x-ray, and electrocardiographic and laboratory studies will make the diagnosis in most cases. The results of the studies as seen in dissecting aneurism have been presented above.

The differential diagnosis includes myocardial infarction as the most prominent confusing condition. Other conditions which must be considered vary with the area of dissection and the other vessels included. Some of the more commonly confused conditions are: acute myocardial infarction, arterial embolism, subacute bacterial endocarditis, congestive heart failure, perforations of abdominal viscera, acute pancreatitis, acute cholecystitis, intestinal obstruction, cerebral embolism, cerebral thrombosis or hemorrhage, subarachnoid hemorrhage, pulmonary embolism, renal calculus and renal infarction.

It is not possible to discuss the various differential points in a paper of this scope.

TREATMENT

The status of treatment of dissecting aneurism is a very controversial subject at the present time. The accepted treatment in the past has been one of conservative management by medical means but in the past five years surgical treatment has been attempted in several cases with variable results.

Conservative treatment consists of absolute bed rest, relief of pain by morphine, relief of shock, and other supportive measures. The patient should remain at bed rest for five to six weeks while the active phase of the dissection is present. Anticoagulants are believed to be contraindicated because of the danger of facilitating any leaks at the almost accomplished site of external rupture. This

makes distinction from myocardial infarction absolutely necessary. After patients recover from the initial phase of dissection, it is believed rational to treat the existing hypertension with anti-hypertensive drugs. This has been carried out with varying degrees of success.^{3,20} On this management of supportive treatment, from 10% to 25% of the patients survive the initial onslaught of the dissection process.^{3,9,18,20,23,24}

The conservative British point of view regarding treatment of dissecting aneurism is expressed by Pyle¹ when he states, "It is too soon to say whether surgery will have any part to play in the management of dissecting aneurism. One is tempted to say it will not, but a few years ago one would have said the same about coarctation of the aorta, aortic stenosis or septal defects."

The leading advocates of a surgical approach to dissecting aneurism are Dr. Michael DeBakey and associates.^{2,25,26} They state that symptomatic treatment has been entirely unsatisfactory and that a radical surgical approach is necessary in a condition which is from 75% to 90% fatal. Such procedures are now possible because of the rapid advances made in cardiovascular physiology.

The first known surgical attempt to treat dissecting aneurism was by Gwin et al. in 1935. They reported² a case with dissecting aneurism of the aorta and involving the right external iliac and femoral arteries. There was obstruction of the femoral artery in this case and the operation consisted of opening the iliac artery proximal to the area of obstruction and then connecting the path of dissection to the lumen of the vessel. This connection through the intima and media was made without difficulty and pulsations were restored in the femoral artery distally. The patient unfortunately died of uremia on the sixth postoperative day.

A second attempt at surgical correction of a dissecting aneurism was reported by Johns²⁷ in 1953. This case had an internal and an adventitial tear. Both of these were repaired but the patient died of postoperative renal failure.

23. Lyons, C., and Edwards, W. S.: Experience with Aortic Dissecting Aneurisms, *Am. Surgeon* 23: 520 (1957).

24. Warren, W. D.; Beckwith, J., and Muller, W. H., Jr.: Problems in the Surgical Management of Acute Dissecting Aneurism of the Aorta, *Ann. Surg.* 144: 530 (1956).

25. DeBakey, M. E.; Cooley, D. A., and Creech, O., Jr.: Surgical Treatment of Dissecting Aneurism, *J. A. M. A.* 162: 1654 (1956).

26. DeBakey, M. E.: Dissecting Aneurism of the Aorta, *Surg., Gynec. and Obst.* 102: 372 (1956).

27. Johns, T. N. P.: Dissecting Aneurism of the Aorta, A Report of a Case with Repair of Perforation, *Ann. Surg.* 137: 232 (1953).

Shaw²⁸ reported the use of a surgical procedure similar to that used in 1935 by Gwin et al. In this case a longitudinal incision was made into the dissecting aneurism in the abdominal aorta. A soft clot was removed and the false lumen allowed free flow of blood from above. A small window was made through the media and intima to establish a double lumen for the aorta. This procedure relieved arterial obstruction to the lower extremities but the patient died on the ninth postoperative day. The operation was described as a fenestration of the internal wall of a dissecting aneurism. The procedure was recommended by Levinson, Edmeades and Griffith in 1950²¹ but no attempt was made to use it on patients.

Osler Abbott has attempted to wrap the area of aorta involved in the dissection in cellophane. Two patients operated on by this method are known to have lived two years. Abbott does not feel this is a worth-while procedure and instead recommends resection of localized areas of dissection and replacement with arterial grafts.³

The most recently described method of surgical attack has been that of DeBakey and colleagues.^{2,25} Bailey and colleagues described a slight modification of the DeBakey procedure which is not unlike the latest modification by DeBakey's group. The 10% of cases surviving aortic dissection are those in which the dissection is back into the lumen of the aorta, creating a double lumen and stopping further progress of the dissection. Operation should attempt to interrupt the progress of the aortic dissection and to restore aortic function. The operative approach suggested by Shaw²⁸ attempted to restore aortic function by creating a window between the false and true lumen of the aorta but did not stop progression of the dissection.

The procedure described by DeBakey et al. consists of creating a reentry passage into the aortic lumen and then obliterating the false passage below by expressing the clots and suturing the intima, media and adventitia of the aorta together all the way around. The aorta is then joined by an end-to-end anastomosis. The completed process leaves a double lumen to the aorta above but only a single lumen below the site of cross-clamping. Reducing the extent of the false passage tends to reduce peripheral resistance to blood flow and diminishes the likelihood of continued dissection and rupture of the outer wall. The restoration of blood flow through the normal aortic lumen tends to relieve the compressive effects of the false passage upon major vascular channels arising lower down on the aorta. The procedure described above is used on cases with dissection beginning in the ascending part of the aortic arch.

28. Shaw, R. S.: Acute Dissecting Aortic Aneurism, *New England J. Med.* 253: 331 (1955).

When the dissection begins near the origin of the left subclavian artery, a more curative operation is employed. The operation consists of excision of the area of aorta where the dissection began and closure of the false passage below. Continuity is established either by end to end anastomosis or by insertion of a homograft. Postoperatively, it is important to control hypertension in this group until such time as the outer wall has been sufficiently reinforced by fibrous connective tissue to prevent rupture.

DeBakey et al.² describe their surgical experience with 13 cases. In four cases the dissection began in the aortic arch, while in nine cases the dissection had its origin distal to the left subclavian artery. The dissection extended the entire length of the descending aorta in all except two cases, and in three cases extended beyond the aortic bifurcation.

The surgical procedures used were those described above for the various types of dissections. Of these 13 patients, ten survived the operation and at last follow up were doing well. In recent literature^{22,23,24,29,30} there are reports of individual cases treated either by the fenestration procedure of Shaw or the aortic window, plus obliteration of the false passage below, as described by DeBakey.

Apparently the time has come for a more radical approach to dissection of the aorta. The 90% mortality is appalling and only with prompt diagnosis and surgical correction can this figure be reduced. The operations which have been devised are not curative for those dissections involving the arch but until methods of direct surgical attack are developed they offer some degree of success.

There is at present a serious question as to whether surgery should be done on an emergency basis as soon as the diagnosis is established. The only case in DeBakey's 13 cases who had emergency operation died of hemopericardium. It seems likely, at the present time, that the early appearance of cerebral infarction or severe aortic insufficiency, signifying both the proximal location of involvement of the aortic arch and the limitations of surgical salvage, would represent a contraindication to emergency surgical efforts.³

PROGNOSIS

In general, the mortality for untreated dissecting aneurism varies from 80% to 90%.³¹ Most of

these are sudden deaths. Of the 10% to 20% that survive the initial onslaught, one-half develop a second dissecting aneurism and die from it. The other one-half die from other causes.

Death in the acute stage usually results from shock, pericardial tamponade, hemorrhage into other serous and/or tissue spaces, uremia or congestive heart failure. Congestive heart failure is the most common cause of death in the patients who recover from the dissection.

There is no present estimate as to the prognosis with radical surgery. Very few attempts have been made to salvage a patient with an acute dissection. DeBakey² reports 10 of 13 patients operated on in a chronic stage doing well after one year follow-up.

SUMMARY

An attempt has been made to correlate the pathologic physiology of dissecting aneurism with the clinical picture and the newer radical surgical procedures used in its treatment.

Dissecting aneurism has been recognized as a pathologic entity for many years but only recently has it assumed clinical importance. The condition occurs more commonly between the ages of 40 and 70 years and has been found in about 0.25% of autopsied cases. Males are affected two times as commonly as females. Thirty per cent of the cases are seen before the age of 40 years and these are frequently associated with pregnancy and coarctation of the aorta.

The types are related to the site of intimal tear and the area of aorta involved in the dissection. The most common sites of intimal tears are the ascending aorta and just distal to the left subclavian artery. Different branches of the aorta are sheared off as the dissection progresses. Multiple dissections are reported in the literature.

The underlying pathologic lesion is degeneration of the structural elements of the medial coat of the aorta. The usual feature is cystic necrosis of the media. There are two theories as to the pathogenesis of the dissection:

1. Hemorrhage from the vasa vasorum breaks through the media and intima exposing the intima to intra-aortic pressure and allowing aortic blood to dissect along the weakened media.

2. The process begins as an intimal tear and then blood dissects along the weakened media.

The etiology may be related to ischemia of the aorta. Thus any disease process limiting the blood supply to the aorta is related. Hypertension is related to the dissection. Marfan's syndrome, tuberculous aortitis, coarctation of the aorta and trauma are all implicated as etiologic factors.

29. Benson, W. R.; Hamilton, J. E., and Claugus, C. E.: Dissection of Aorta: Report of a Case Treated by Fenestration Procedure, *Ann. Surg.* 146: 111 (1957).

30. Gilman, R. A., and Bailey, C. P.: Surgical Treatment of Dissecting Aneurism, *J. Thoracic Surgery* 33: 670 (1957).

31. Bauersfeld, S. R.: Dissecting Aneurism of the Aorta: A Presentation of 15 Cases and a Review of the Recent Literature, *Ann. Int. Med.* 26: 873 (1947).

The clinical picture is extremely protean and is characterized chiefly by pain, respiratory symptoms, various neurologic symptoms (both peripherally and centrally), renal symptoms, and frequently gastro-intestinal symptoms. The chief physical findings are variations in extremity blood pressures, absent or decreased peripheral pulses, hypertension, pulsation of the sternoclavicular joint, varying systolic and diastolic murmurs at the aortic area, and varied neurologic manifestations.

The x-ray picture is helpful in making the diagnosis when correlated with the clinical picture. Laboratory studies and electrocardiography are important occasionally in the diagnosis. Antemortem diagnosis is made in about 50% of the cases at the present time. The chief considerations in the differential diagnosis are myocardial infarction and acute gastro-intestinal problems.

The conservative and supportive treatment is similar to that of myocardial infarction and includes bed rest, sedation, analgesics, treatment of shock, and control of hypertension. Recently, a more radical surgical approach to treatment is being attempted. The aims of surgical treatment are to prevent further dissection and to restore normal function to the aorta. When the dissection begins in the ascending aorta, the procedure consists of creating a reentry passage from the false to the true lumen and obliteration of the false passage below. When the dissection begins below the origin of the left subclavian artery, the procedure consists of excision of the involved segment of the aorta and obliteration of the false passage below. Continuity is restored by end-to-end anastomosis or with a homograft. Several patients have been successfully treated with these procedures.

The prognosis is extremely poor if untreated. The mortality is 80% to 90%. At present, it appears that surgery is the only constructive approach to the problem of correcting the defect.

The maternal mortality rate in this country has declined 93 per cent in the last four decades, Health Information Foundation points out. One maternal death occurs in approximately 2,300 live births today, compared with one maternal death for each 165 live births in 1915.

The Foundation calls recent improvements in safety to women in childbearing "an almost unparalleled achievement of medical progress." Maternal factors now cause only one-tenth of 1 per cent of all deaths in this country and only 4 per cent of all deaths among women of reproductive age.

The early twenties are the safest years for childbearing, Health Information Foundation reports. For every 10,000 live babies born to women in the 20-24 year-old group today, only 3.2 maternal deaths occur.

Heart Disease Used as Anxiety Defense—For some persons to face life, they may need to believe they have heart disease even when it has been proved they do not, three eastern physicians said recently.

Their conviction may represent a necessary defense against "potentially overwhelming anxiety," the doctors said in the Nov. 22 Journal of the American Medical Association.

They made a six-year study of 52 persons with chest pain. Of these 27 were classified as having a "cardiac neurosis," in which they showed no evidence of heart disease but were convinced of its presence. Twenty-five had angina pectoris.

The 27 patients who believed they had heart disease were "all intensely anxious people whose neurotic behavior was readily apparent," the doctors said. They tended to dramatize their symptoms and often referred to their "heart pain." Some of them were totally incapacitated, while others were able to lead an active and constructive life in spite of their symptoms.

They showed "a high degree of secondary gain" from their ailment, the doctors said. In some, the pain represented a means for setting limits to their activities and freed them temporarily from intense pressures or responsibilities. It seemed to act as a means of getting attention and of controlling family members. In others, the pain represented an acceptable "excuse" for failing to attain certain objectives. For some, there was a definite monetary compensation from their pain.

If their compensation or need for invalidism was questioned, they became angry and defensive, the doctors noted.

"Once an individual has allowed himself to regress to this stage of dependency," the doctors continued, "it is difficult or impossible for him to relinquish this way of life even though the diagnosis of heart disease has been disproved."

"Their eventual incapacity equals the most serious types of heart disease. Sudden withdrawal of long-continued compensation may be disastrous. It seems highly probable that the conviction they have heart disease may be essential for the functioning of some patients in life at certain times."

Under these circumstances it is often advisable to allow the patient to maintain his cardiac neurosis, they said. However, physicians should do all they can in helping such patients overcome their fears by understanding the underlying sources of the patient's anxiety and his conflicts.

Other points the study showed were:

—The average number of doctors consulted by each patient in the cardiac neurosis group was 4.7 compared to only 1.5 for each patient with angina pectoris. It was not unusual for the neurotic patients to be consulting a number of physicians simultaneously.

—The onset of chest pain in every patient with cardiac neurosis was preceded by increasing emotional tension and was often associated with deterioration in their life situations.

—Some of the patients with angina pectoris had cardiac neuroses as severe as the members of the other group. These patients were very anxious, which increased the frequency and severity of the anginal attack. They became "overtly terrified and behaved as though any physical or emotional strain was too great for them. They seemed to have 'wrapped themselves in cotton wool.'" However, most overcame their fears and learned to live constructively within their newly imposed limits.

Authors of the article are Dr. William N. Chambers, Mary Hitchcock Hospital, Hanover, N. H.; Dr. Joseph L. Grant, Veterans Administration Hospital, White River Junction, Vt., and Dr. Kerr L. White, University of North Carolina, Chapel Hill, N. C.



IT IS NOT YOU ALONE

GUEST EDITORIAL

Joe P. Sanford

Louisville, Ky.

As the activities of organized medicine are destined to play an ever increasing role of importance in the professional and economic life of the individual practitioner, it would appear that indoctrination seminars are most essential. The Medical Association of the State of Alabama is to be congratulated on providing for them. A number of state and county societies throughout the nation have found it profitable to make indoctrination mandatory.

Recently the Kentucky State Medical Association entertained its Congressmen and Senators with a dinner in Washington. One of our more popular Congressmen made this statement to his individual host: "You know, medical public relations are bad. In all of our mail we never get any complaints against the individual physician but we get volumes of it panning the medical profession as a whole."

Our Congressman is telling us nothing new. Surveys made by the American Medical Association and others have demonstrated this for several years. The thing that should be of deep concern to us is that our Congressmen are so obviously aware of it.

Now when the Congressman talked about public relations what was he discussing? The "pros" in P-R circles say that public relations simply means obtaining three important things: recognition, understanding, and acceptance of your services. These three items are interdependent and one without the other is of little or no value. Certainly, we are enthusiastic about this subject and could discuss it at length, but in the space allotted it seems pertinent to point up one most important factor for which there is an acute need and about which, it appears, little is said. That is, simply, "You are not alone" in this business of medical practice.

Based on an address given by the author at the Association's 1958 Indoctrination Seminar.

Editorials

As we enter this discussion, let us remember that the Federal Constitution gave the states certain rights. Alabama, for instance, through its Legislature, elected by the people, has set up a Board of Censors which gives you, after you have met certain requirements, a license to practice medicine. *You are now an independent contractor!* It was set up this way because the people of Alabama had faith in the medical profession and believed it would do the right thing. We should not forget, however, that what the people can give the people can take away.

Now, if you or your contemporaries abuse this privilege, what is going to happen to the impression the people have of you and your profession? While you are an individual contractor under the law and presumably can do as you please, it would not appear that you are entitled or justified to take an indifferent position toward the problems, obligations and duties of the profession.

In order to pin point what we are talking about, let us consider some specific incidences where the individual physician, "exercising my prerogative under the law," has operated to the detriment of the profession. It has created an impression in the public mind which sometimes causes the public to judge—unfairly, of course—the profession as a whole.

In one of our Kentucky towns a group of well meaning members of the homemakers club approached a local physician with the request that he teach a class in nutrition. They came at the end of a long busy day, the physician was tired, completely out of sympathy with the request, and not too courteous. In talking to one of his friends he said he could not be bothered with that drivel. Yet, the good physician screamed to high heaven a couple of weeks later when he learned that the chiropractor down the street had very graciously agreed to teach the course. Do you think this physician's attitude and action obtained recognition, understanding and acceptance of the medical profession in his community?

In another Kentucky town a physician was asked to be the team physician for the local high school. He declined on the ground that he was too busy, and showed no inclination to help the school. Yet, the principal, faculty, and Board of Education

could not understand why he had put up such a fuss when a chiropractor was employed as the "alleged" team physician.

The public often becomes confused at the different kinds of advice it gets from the medical profession. We have one county in which six physicians are practicing and doing a very good job. About half of the doctors there are doing their very best to educate their patients on the matter of properly immunizing their children. They even go so far as to say: If you don't have the money, bring them in anyway. The other group of doctors shows no interest in the matter, refuses to participate in the effort, and says, "What do we have a health department for? Why not let it do it?" Yet, this second group of doctors feels very strongly against socialized medicine. In this situation all the physicians are individual contractors and have a perfect right to say what they want to on their own, but you can imagine how confused the people in the county must be.

As an individual contractor, you have a legal right to say what you want to about another doctor's practice or treatment, but the effect of exercising that right can be disastrous. When you disagree with another doctor's treatment and say, "Well, you got to me just in time," or if you lift an eyebrow and sigh even though you don't say a thing, you are not winning *recognition, understanding and acceptance* for either your service or your profession.

Providing adequate medical care for low-income groups is one of our most pressing problems. Medicine has sponsored Blue Shield and, in some cases, certain other programs to meet this need. The other day a fine young physician in our town was heard to say, "I don't give a hoot about Blue Shield, it has not done a thing for me!" Naturally, the people who heard this were confused. If Blue Shield is not what it should be, then let us work to correct the situation—there are several avenues open—let's not disparage our own child in public.

During the last Easter recess of Congress, we called on one of our representatives relative to the Forand Bill. This is not the same Congressman we referred to earlier. In the course of the conversation he said, "There is a certain town out here that has been going down. Its economy has been adversely influenced by factors it cannot control. Lately five new \$40,000 houses have been built on a hill just outside of the town where everyone could see. Three of those five houses belong to doctors." When he said that, there was a long pause. Hitting below the belt, yes, but what he was thinking was perfectly obvious.

There are countless illustrations that demonstrate that "it is not just you alone." So now we

would like to emphasize it is not a question of the justice of your position. It is not a question of whether you have the "right" under the law to do thus and so. Moreover, it is not a matter so much what you or I think, but what the public—and your Congressmen—think that counts.

Addressing myself particularly to new members of the State Medical Association, I am suggesting we survey the situation as of today in a realistic way. Our profession is the purveyor of medical service, the public is the consumer. You and I know that our profession wants to give the people (the consumer) the best possible medical care.

Now, what kind of a market do we have for our service—a "sellers" or "buyers market"? Due to conditions brought on by World War II, and the expansion of our economy since the war, it has been a sellers market in the main. For the ten years following the war you were pretty much in control. There are signs that a buyers market is now rapidly developing in the medical care field. Unions, government, insurance, industry, and others are pressing more and more demands. In some areas the time honored "fee for service and free choice of physician" system is practically gone. For example, a well informed medical organization man said that more than half of the physicians in Ohio were involved in some sort of limited choice arrangement—were rendering a good service—and he was not worried about it.

In our ranks today there are many crepe-hangers. There are those who feel it is only a question of time until medicine will be completely socialized—that the consumer, through government or devices other than free enterprise, takes over. In the business world, when a buyers market develops, business works all the harder to win "*recognition, understanding and acceptance* of its products—or services."

If you as an individual, if physicians as a profession, really believe that we are offering the best medical care in the world today, if the profession honestly feels it is the profession's obligation to the people to see that our system of practice is the best and should continue if it is willing to accept responsibility and do something about it, we are far from lost. Recently, at our County Society Officers Conference in Kentucky, the President-Elect of the AMA, Gunnar Gundersen, discussed the kind and quality of medicine that is being practiced in Russia. All of you are familiar with the alarming increase in cost of "free medicine" in England. It could happen here.

Many experienced observers feel that the acute need in the medical profession today is for it to recognize that there are some socio-economic problems which medicine should take the lead in solv-

ing. Many feel that medicine has as great an obligation to solve these problems as citizens as it has in constantly trying to improve the actual practice of medicine. In the latter we are doing fine—in the former, what are we accomplishing?

There is a tendency to want to ignore some of these socio-economic problems when we don't have an answer for them. This is just what the socializers want you to do—so they can pass legislation that will give them control over you. We must not be afraid of what we do not understand.

Actually, we know of no single group with any greater potential for doing good, for passing legislation, for accomplishing things in the public's interest, than the medical profession. But, if we are to be productive, we must have faith in our country, faith in our system of practice and be dedicated to the belief that our people have the best medical care in the world and that it is our job to see that they continue to get it.

We must find a way to answer some of these problems and work together to see that they are solved. Medicine must soon get around to the place where it can guarantee performance of agreements that it will be called upon to make. We must learn that we need to police ourselves. It does appear that the one thing that has made the profession great and has attracted so many fine men to it could be the thing that would contribute greatly to its downfall; namely, the complete freedom of action which each individual in the profession has. Medicine just cannot permit members of the profession to use this freedom unwisely, carelessly, or appropriate it for selfish purposes.

Intelligent planning and vigorous implementation of the plans, hard work and much sacrifice—not by the few but the many—will only win back *recognition, understanding and acceptance* of your service and your profession which it formerly enjoyed and which it richly deserves now.

When this is done—and it can be done if we make up our minds—then our Congressmen will come to us for help. Initiative for the solving of socio-economic problems pertaining to medicine will be in our hands instead of in those of the professional socializer.

Yes, what the people give the people can take away. *But* there will be no effort to take it away if our profession works together in the fashion that our people have every right to expect of it.

Yes, "It is not you alone."

INTERNATIONAL COLLEGE OF SURGEONS

The Southeastern Regional Meeting of the International College of Surgeons will meet at the Americana Hotel, Bal Harbour, Miami Beach, Florida, from January 4th to 7th, 1959.

This meeting has been approved for general practitioners by the American Academy of General Practice for Category I credit.

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The twenty-second annual meeting of The New Orleans Graduate Medical Assembly will be held March 2, 3, 4 and 5, 1959, headquarters at the Roosevelt Hotel.

Eighteen outstanding guest speakers will participate and their presentations will be of interest to both specialists and general practitioners. The program will include fifty-four informative discussions on many topics of current medical interest, in addition to clinicopathologic conferences, symposia, medical motion pictures, round-table luncheons and technical exhibits.

Following the meeting in New Orleans, arrangements have been made for a clinical tour to Mexico City, Cuernavaca, Taxco, Acapulco and San Jose Purua, leaving from New Orleans on Friday, March 6 and returning on Saturday, March 21.

Details of the New Orleans meeting and the clinical tour are available at the office of the Assembly, Room 103, 1430 Tulane Avenue, New Orleans 12, Louisiana.

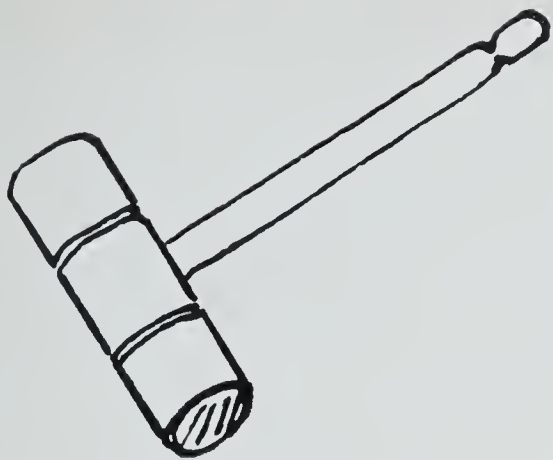
SECTIONAL MEETING

AMERICAN COLLEGE OF SURGEONS

Sectional meeting of the American College of Surgeons will be held at the Francis Marion Hotel in Charleston, S. C., January 19-21, 1959.

The program will include hospital clinics and sessions at the headquarters hotel. Some of the hotel sessions will feature a wide variety of papers on surgical subjects, panel discussions on arterial occlusive disease, management of gastrointestinal hemorrhage, and another on abdominal emergencies. Symposia will be conducted on cancer and trauma. Luncheon sessions will be conducted at which participants in the morning programs will be expected to answer questions from the audience and to enlarge upon the subject matter covered in their morning presentations.

A reception and dinner will be held for visiting surgeons and their wives and sightseeing tours and other attractions will be scheduled for the visitors.



President's Page

NURSES

The medical profession and the nursing profession have worked hand in hand for so many years, our work is so complementary and often we are so dependent on each other for success in our fight against suffering and disease that it seems fitting to review some of our problems. Certainly a shortage of nurses is one of the real problems. Almost daily we hear patients complain that they cannot get good nurses to nurse patients in the home. Many registered nurses will not nurse a patient in the home. No doubt the reasons and motives behind this decision are real and justified. It is easier to nurse in a hospital. The equipment is at hand and treatment can be given more efficiently. Also, there are more calls for graduate nurses to work in the hospitals than can be met. The shortage in smaller towns and cities is even more acute. We find new hospitals being built under the Hill-Burton program which are severely handicapped because nurses are not available to operate them. All the causes for this shortage may not be readily apparent but one or two do stand out. The fact that in the past 20 years many schools for nursing have closed in this state is the outstanding cause. Many factors have led to the closing of these schools but certainly the expense of operation has been the greatest. Hospitals that for years operated fine schools and turned out some of our finest graduate nurses found that they could no longer afford to operate a training program. They had rendered a great service in training nurses but we cannot expect these private institutions to shoulder this burden alone. Nurse training is as much a part of our educational system as any other. Those in charge of our public education system should recognize this and include nurse training in their program of tax-supported education. The University of Alabama presently operates a nurse training program on the campus at Tuscaloosa and a hospital integrated program at the University Hospital in Birmingham. Dr. Berson, the vice president in charge of medical affairs for the University, is presently attempting to enlarge the school in Birmingham. I feel that we should give him our wholehearted support. I also feel that those private institutions which struggle under the burden of a nurse training program should get

some help from the Department of Education, particularly in those academic courses which are now required in a training program. The requirements for nurse training also provoke considerable thought. Certainly it is expensive to meet the present requirements. This may have led to the closing of some of the schools. No one can object to better training and greater proficiency. On the other hand there is the possibility that the students may be trained away from their primary object, namely, the care of sick people. Supervisors and administrators certainly need special education and training. It could be that the best supervisors and administrators have had some experience in bedside nursing before they take this special training. I have been particularly impressed with the value of a good public health nurse. In this day of enlightened public health medicine we could not get on without them. Besides being individuals of exceptional ability I am sure that they have had some special training. This special training in administration, supervision and the specialty fields of nursing might well be reserved for those graduates of exceptional ability who wish to pursue their training into advanced fields.

As the supply of graduate nurses gradually diminished, to meet the need of bedside nursing there grew, "like Topsy," a remarkable and heterogeneous group, the practical nurses. I cannot praise them too highly for their availability, their willingness and their presence in an hour of need. Some of the finest bedside nurses that I have worked with have been practical nurses. On the other hand their group is not uniform as their costume implies. Often their educational, physical and mental qualifications leave much to be desired. The program of licensed practical nurses is an attempt to correct these shortcomings. Today it does not seem to have solved the problems of bedside nursing. Some day it may and the graduate nurse relegated to a relatively small field of education, supervision and administration.

There are two phases of nursing that particularly interest me. One is the visiting nurse service. These remarkable practitioners call on patients in their homes and give treatments such as penicillin, Mercuhydrin or streptomycin injections, bed baths or enemas under the order of the at-

ORGANIZATION SECTION

tending physician. Since they can see ten or more patients daily the charge is not too great. In this day of increased cost of medical care and shortage of hospital beds and nurses I do not see how we could get on without them. It is interesting to see how understanding, resourceful, sympathetic and helpful these nurses become after they have been in this work for a few years. No doubt they are carefully selected but the daily contact with a number of ill people who need and await their help may be a factor in their development. The advantage of some contact with the people to be served might be considered by those who plan and administer the programs of nurse training. The other aspect of nursing that has interested me has to do with the nursing care of the aged and infirm. As was said in an earlier issue of this page, this problem is growing each year. The care of these helpless people presents a real nursing problem. I have been much impressed by the way colored nurses handle this problem. They seem to have a tolerance, kindness and understanding that is not usual with white nurses. Perhaps a program designed to provide some uniformity in

training, attainment and dress and some recognition in title and remuneration might be a help.

To conclude these rambling remarks, it is apparent that medical affairs and education are controlled largely by males and nursing affairs and education are controlled largely by females. We may not always fully understand each other. There are times that they have reasons for their actions that we cannot recognize. Often they arrive at fine decisions by emotions and intuitions that we cannot perceive. You might wonder why we do not relegate these matters that we have in common with them to the many fine female doctors we have in our own ranks. A sophomore psychiatrist could probably tell why this would not work. It remains for us to try to get together with them in our mutual fight against suffering and disease.

Colgan J. Durbin



ORGANIZATION SECTION

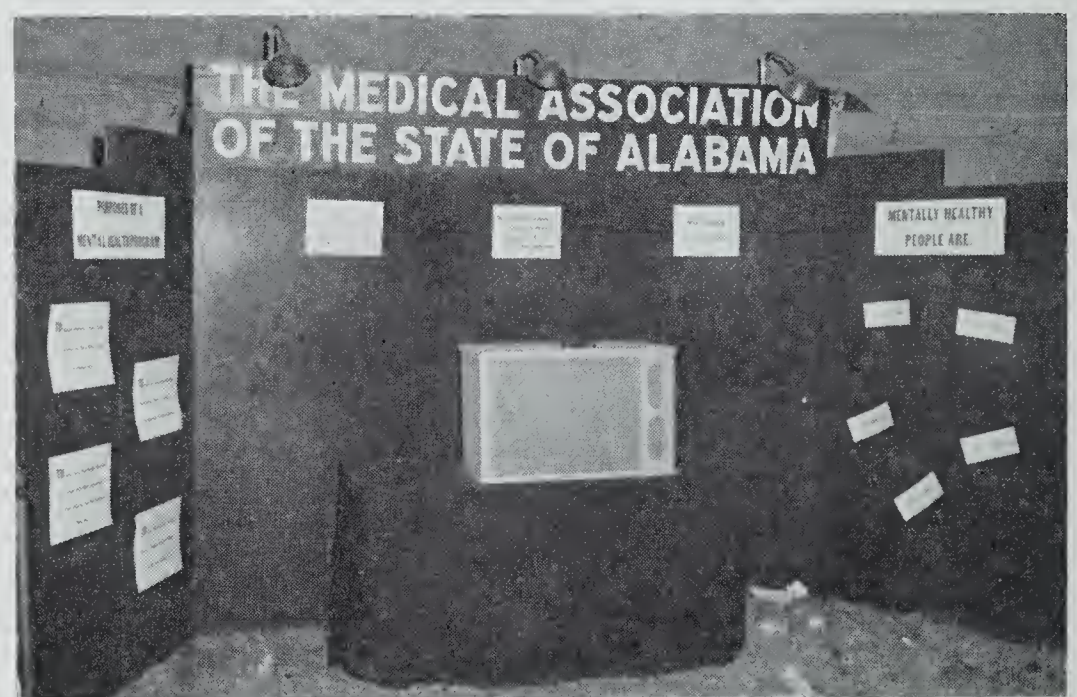
STATE FAIRS EXHIBIT

The Association's exhibit at state fairs this year was centered around the theme of mental health and was displayed in Birmingham, Montgomery and Mobile.

The exhibit was designed and displayed under the direction of the Committee on Public Relations, and pamphlets from the Alabama Association for Mental Health were distributed.

While there was no audience participation and therefore the effectiveness of the exhibit could not be measured, it is felt that it was successful in its purpose.

The picture at the right does not do justice to the exhibit because the color of the film does not show and the two-dimensional photograph cannot portray the interesting appearance of the display. However, it reproduces the layout with the left panel listing the purposes of a mental health program; the center panel giving statistics; and the right panel enumerating some of the good characteristics of mentally healthy people. The repeater projector in the center of the table showed



M. A. S. A.—STATE FAIRS EXHIBIT

a twelve-minute film on mental health almost continually. During the three-week period, the film was shown approximately 625 times.

COMMITTEE ON INSURANCE

Brochures on simplified claim forms for accident and health insurance have been distributed to Association members by the Committee on Insurance. Approval for a series of simplified forms

was given at the 1958 annual session of the Association, and the Health Insurance Council worked closely with the American Medical Association in their preparation. The forms described in the brochures have been approved by the AMA Council on Medical Service. Dr. J. O. Morgan, chairman of the state Committee on Insurance, has recommended that the booklet be passed on to the secretaries of the members, to be used as a guide in completing claim reports.

COMMITTEE APPOINTMENTS

Dr. John A. Martin, Montgomery, has been appointed to serve the unexpired term of Dr. J. E. Moss on the Committee on Public Relations.

Dr. L. R. Burroughs, Jr., Birmingham, has been appointed to membership on the Committee on Public Relations to serve the unexpired term of Dr. W. E. Doggett, Jr.

AMA NEWS CORRESPONDENTS APPOINTED

Mr. Steve Yates, Birmingham; Mr. Ted Pearson, Mobile; and Mr. Bob Ingram, Montgomery, have been selected as correspondents for the *AMA News* in Alabama. All three have accepted their appointments.

ANNOUNCEMENTS

The American Cancer Society, Alabama Division, will hold a cancer seminar at the Dinkler-Tutwiler Hotel, Birmingham, January 28-29, 1959. Cooperating with the Cancer Society will be the American College of Surgeons, Alabama Academy of General Practice, Jefferson County Dental Association, Jefferson County Medical Society, The Medical Association of the State of Alabama, and the Medical College of Alabama. Dr. Paul G. Reque, Program Chairman, has announced a list of top flight speakers from over the country and programs have been mailed to all Association members. There is no registration fee and all Alabama doctors are invited to attend.

MEDICAL ASSISTANCE PLAN FOR SMALL COMMUNITIES

The Sears-Roebuck Foundation has announced a new program of assistance aimed at helping small rural communities obtain the services of a top grade medical doctor. The Community Medical Assistance Plan does not advocate small hospitals but only medical facilities with emergency treatment rooms and one or two recovery beds. Under the new program the physical facilities are the property of the community and are made available to the doctor at a nominal rental. Brochures and application forms are available from the state office.

PEOPLE-TO-PEOPLE

President Eisenhower called a White House Conference in September 1956 at which about fifty leaders in American business, professions, and the arts assembled to hear the President encourage them to organize committees to develop methods of people-to-people contacts through related professional and cultural interest. Leaders in the medical and health professions subsequently formed a committee which "seeks the help of individual members of the medical and health professions in developing and deepening friendship with counterparts in other lands. . . ." Dr. Louis H. Bauer, immediate past president of World Medical Association, Chairman; Dr. Gunnar Gundersen, President, American Medical Association; and Dr. Dwight H. Murray, past president of AMA, are among the twenty-three members of the committee.

The committee has listed six ways in which individuals can help. They are: (1) Exchange international correspondence, (2) Entertain guests from abroad, (3) Attend international meetings, (4) Make a vacation trip abroad, (5) Study or lecture in other countries, (6) Contribute books, journals, slides, films, equipment or other professional material to help rebuild medical libraries devastated by war, and to aid in developing resources in underdeveloped countries. Later projects are envisaged.

Further information can be obtained by writing to Dr. Louis H. Bauer, Chairman, People-to-People Committee for Medicine and the Health Professions, 10 Columbus Circle, New York 19, New York.

NIMH PROGRAMS FOR GPs

The National Institute of Mental Health has announced two new programs in support of training for general practitioners who wish to receive postgraduate training in psychiatry or who may wish to undertake residency training in order to become psychiatrists. Funds are available during the current year (fiscal year 1959) for these grants, and training institutions may submit applications at any time.

The program has two purposes: (1) To foster the development of postgraduate training in psychiatry for the practitioners who wish to increase their psychiatric knowledge and skills in order to be able to deal more effectively with the emotional aspects of illness generally and in order to play a more effective role in the treatment and prevention of mental illness. These courses will be designed for the physician who plans to continue practicing in his own field.

(2) To provide support at an adequate level for psychiatric residency training for physicians in

practice who wish to become psychiatrists. Training stipends up to a maximum of \$12,000 a year are available. The level of payment will be determined by the training institutions, which will also make the award to the individual physicians. The National Institute of Mental Health will make awards of grants for this purpose to training institutions and not to individuals.

Inquiries about the program should be sent to Dr. Seymour D. Vestermark, Chief, Training Branch, National Institute of Mental Health, Bethesda 14, Maryland.

SPECIAL ARTICLE

THE NEW MODEL AMA

By

Gunnar Gundersen, M. D.

President, American Medical Association

(Written, by request, especially for the
Alabama Journal)

All across the nation advertisers once again are touting the arrival of the "new 1959 fall models"—super-deluxe, streamlined products ranging from automobiles to washing machines.

This fall a "new model AMA" is making its bow. Today's AMA should make every physician proud to be a member. It is a 1959 version—up-to-date, streamlined and far more dynamic than in the past.

Within recent years the American Medical Association has taken on a new look. The changes, reflected in a more dynamic organizational "personality," stem from new policies, new projects and from the people who guide its activities.

Although the AMA began as a small professional organization, formed to eliminate chaotic medical education conditions and to reduce the evils of patent medicines, since 1847 it has gradually yet steadily expanded its scope. Today AMA is a recognized and respected national force for the betterment of the public health as well as for the betterment of the profession.

Today's AMA is an institution whose influence on the public, the profession and the times is profound, primarily because of its vigor and its capacity for leadership. AMA now marches under the banners of public service as well as of improved medical care—its long-time objective.

As a member of the medical profession, you have a vital role to play in the forging of this new national organizational concept. This Association is your Association—wherever you may practice, whatever your field of medicine. You cannot—you must not—turn your back on it.

If at any time you feel your views are not being considered, take action. Do more than merely "belong" to your local and state medical societies. Attend meetings and vote. Make your voice heard—both locally and nationally. Only in this manner can your elected leaders be well prepared to handle the problems that face our profession today.

This day-to-day leadership in national medical affairs, which you delegate through your state and county medical societies, carries with it a tremendous responsibility.

To strengthen and intensify the work being undertaken at Association headquarters, the Chicago staff has undergone widespread organizational changes in recent months.

As you may know, Dr. F. J. L. "Bing" Blasingame has assumed the new title of executive vice president, and Dr. George F. Lull, who formerly was general manager, has been named assistant to the president. Dr. Blasingame has full responsibility for all operations of the headquarters staff.

To assist him with the Association's affairs, Dr. Ernest B. Howard has been named assistant executive vice president and also temporarily has assumed responsibility for the administration of the many council and committee activities. Other assignments include Mr. Russell Clark, director, business division; Mr. C. Joseph Stetler, director, law division; Mr. Leo E. Brown, director, communications division; Dr. Austin Smith, director, scientific publications, and Mr. Aubrey Gates, director, field service division.

All of these are sincere, dedicated men who work with the officers, trustees, delegates and council and committee members of the Association in carrying out the mandates of the House of Delegates.

At the present time the *new* AMA is developing vital programs in a number of new areas that are destined to spell better health for all our people. Let us look at a few of them to see how the revitalizing forces that have overtaken our headquarters personnel have overflowed into the *program* of our Association.

This fall the Association—in cooperation with the Federal Food and Drug Administration and the National Better Business Bureau—launched a nationwide campaign to combat quackery in the nutrition field. This is principally a campaign to educate the public on the dangers of the multi-million dollar food fads and nutrition quackery that currently is sweeping the country. Physicians in their own communities can lend a hand by exposing the promoters of food supplements and eccentric diets whose fraudulent claims are luring countless thousands of Americans away from

sound nutritional habits and competent medical care.

Another equally urgent problem facing our nation today is that of our aging citizens. Through its Committee on Aging, the AMA has outlined a course of action to provide the necessary leadership—locally and nationally—to meet the challenge of the aging on the social, economic, psychological, physiological and occupational levels. This effort requires implementation by the community and by the individual. But the medical profession once again feels its obligation to set forth the problems and strive to work out satisfactory solutions cooperatively with other national and local organizations.

An example of the way in which medicine solicits the good will and support of other groups in working out mutual problems is the new program on automobile safety—calling to the attention of the American public the need for using seat belts. The AMA, in cooperation with the U. S. Public Health Service and the National Safety Council, within the next few weeks will embark on a nationwide educational campaign pointing up the desirability and life-saving features of seat belts.

Through its Committee on Injury in Sports, the Association in recent months has encouraged local communities to set up high school sports injury conferences so that every athlete will have the best possible protection in sports participation. At these conferences, athletic directors and team physicians can be briefed on the proper recognition and referral of injuries as well as the need for continuing medical supervision of high school athletics throughout the school year.

To meet the need for expanded research facilities, the Association has established a new foundation—the American Medical Research Foundation—to conduct non-partisan, competent studies in the socio-economic realms that involve medicine and also in pure medical research wherever such research can add to the sum total of our scientific knowledge. This new foundation will be able to provide new vigor to medicine's efforts to further scientific knowledge and skills—and, in addition, will provide factual, valid conclusions for our socio-economic efforts.

If you still have any doubts about your Association's forward-thinking programs or feel that they only remotely concern you, keep in mind that the *new* AMA now is better equipped to provide you with *direct* services that will aid you in your medical practice.

Here are just a few of the many services designed "for doctors only":

★ *THE AMA NEWS*—our new semi-weekly newspaper that carries last-minute information

on socio-economic matters of interest to medicine.

★ *Medical meetings*—through its annual and clinical meetings top-notch medical colleagues bring you up to date on the latest information on medical and surgical techniques and equipment.

★ *Placement aid*—offers counsel on new locations for physicians and helps communities find needed doctors.

★ *Practice aids*—offers information on setting up a practice, office layouts, bookkeeping and billing procedures, tips for the doctor's assistants, handling patients, explaining costs and so on.

★ *Periodical and package library services*—for the physician who does not have access to a city or university medical library the AMA's package and periodical library services offer valuable information and reprints on a wide range of scientific subjects.

★ *Legal aspects of practice*—physicians and their attorneys may obtain extensive advice and information on a variety of legal points such as autopsies, chemical tests for intoxication, confidential communications, medicolegal forms, income tax and impartial medical testimony.

★ *Literature for patients*—pamphlets and booklets—both of a public relations and health education nature—may be secured through the Association for distribution to your patients.

This, then, is the *new* American Medical Association—streamlined and positive in its thinking, in its administrative setup, in its research and scientific activities, in its informational services and in its progressive public service programs.

As I have intimated before, however, this new Association of ours depends for its leadership upon each one of its 175,000 physician-members. This *new* model AMA cannot run alone.

AMA needs *your* support if it is to continue to provide the best in medical leadership and the best in service to all Americans.

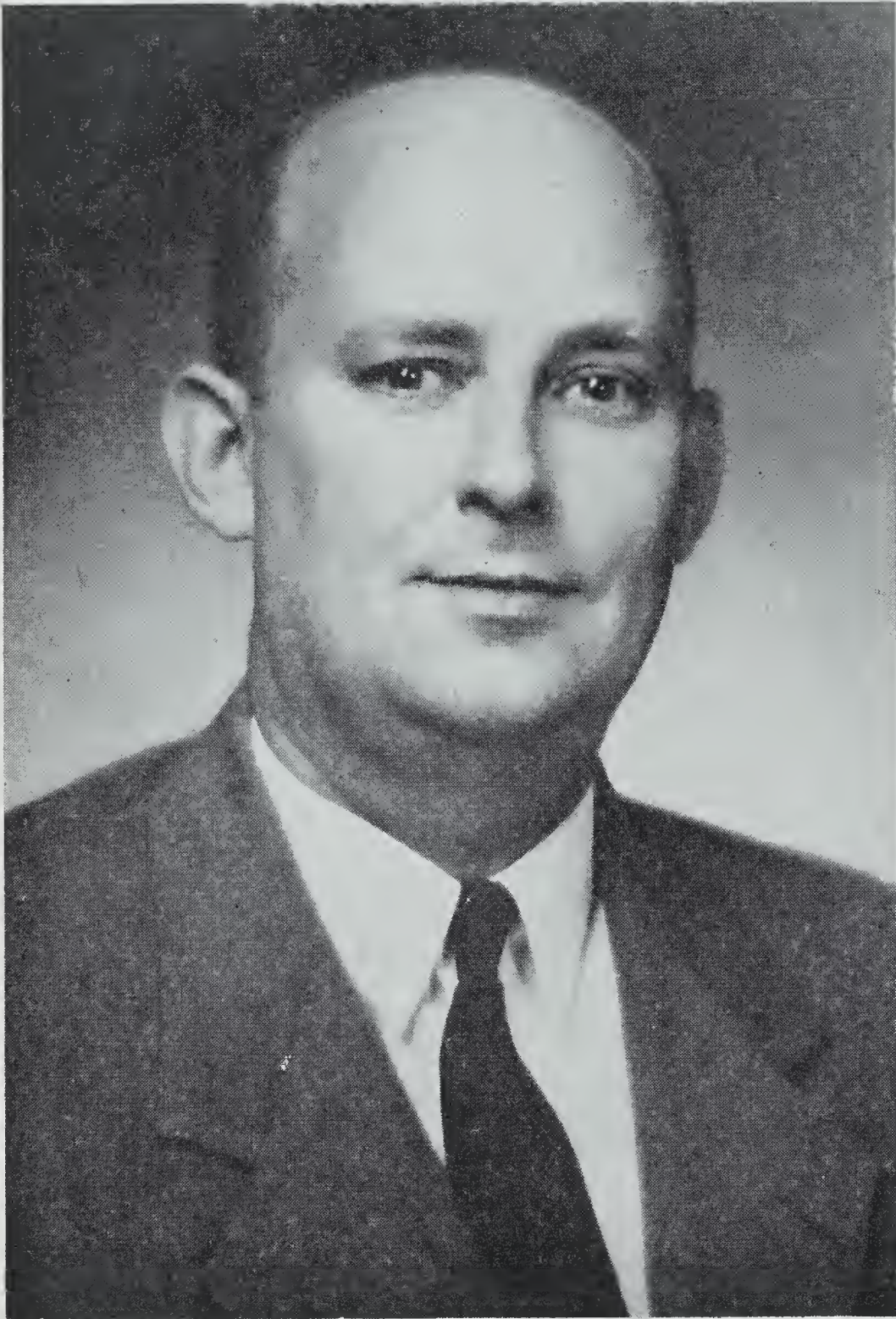
Don't let *your* Association—*your* medical team—down!

"Work-related illnesses" are a common occupational hazard for the U. S. physician, according to the publication "Patterns of Disease," prepared by Parke, Davis & Company for the medical profession. The current issue reports on the results of a special survey, both the largest and most recent in its field, conducted among more than 9,000 doctors.

More than one-tenth of all physicians in the survey reported they had incurred illness during the past three years as a direct result of their practice. Of these, almost three-quarters were afflicted by infections and more than one-fifth developed allergic dermatitis or other forms of allergies. One in 30 with work-related illnesses was injured by overexposure to radiation.



MEDICAL CENTER NEWS



Executive Director
Dr. Richard T. Eastwood

DR. RICHARD EASTWOOD NAMED EXECUTIVE DIRECTOR

Dr. Richard T. Eastwood has been appointed Executive Director of University Affairs for the Medical Center, it was announced recently by Dr. Frank A. Rose, University of Alabama president.

The appointment was effective as of October 15. The president said Dr. Eastwood in his new position will serve as his administrative representative in Birmingham and will coordinate University affairs in the Birmingham area with the general policies and objectives of the University. He explained that all normal administrative procedures in connection with the Medical Center now will be handled in Birmingham. "The new position will allow Dr. Berson, vice president for

health affairs, to give more of his time to the expansion and development of the Medical Center. Dr. Eastwood will be of valuable assistance to the fine team now assembled in Birmingham," he said. "His knowledge in the field of education, his fine administrative ability, and personal energy make him the ideal selection for such a position."

Dr. Eastwood comes to us from the University's Birmingham Center where he joined the faculty in 1939 and where he has been director since 1951 and associate dean of the Extension Division since 1956. He received his A. B. degree from Tarkio College, Tarkio, Missouri, his M. A. from the University of Nebraska, and his Ph. D. degree from the University of Wisconsin. He is a past president of the Alabama chapter of the Society for the Advancement of Management and past alternate national director. He served as the first chairman of the Committee on Aging of the Jefferson County Coordinating Council, is a member of the American Economic Association, the Industrial Relations Research Association, the Society for the Advancement of Management and Alpha Kappa Psi. Dr. Eastwood is an elder in the First Presbyterian Church and a member of the Birmingham Rotary Club.

NEW PSYCHIATRIC CLINIC RECEIVES FEDERAL GRANT

Announcement was made recently of a federal fund grant of \$196,187 for a new psychiatric clinic at the Medical Center. Located at University Hospital, it is the first unit of a proposed new ambulant patient center.

Designed to handle an estimated 25,000 patients a year as well as for expanded research and teaching purposes, the clinic is a self-financing operation, since no community funds are available for the hospital's vast indigent out-patient service.

The present psychiatric clinic is located in offices on the second floor of a store at the Medical Center. Space is inadequate, as it is in the main out-patient clinic headquarters at the hospital.

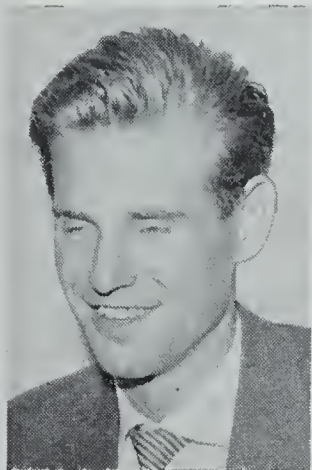
The new psychiatric clinic will be constructed in the block chosen for the proposed out-patient center, bounded by Sixth and Seventh Avenues and 17th and 18th Streets, South.

NURSING SCHOOL MOVES

The School of Nursing recently moved its offices and classrooms from the New Hillman Building to what was formerly Doc Gus' restaurant. The building was renovated at a minimum cost and included new paint, lighting, tile floors, heating and air conditioning. The kitchen was turned into a laboratory and the downstairs dining room was divided into three classrooms, with a capacity of 100 students each. The storage area upstairs became the office space for 12 offices and it also houses the faculty.

DR. WOLFGANG ROTH JOINS RESEARCH STAFF

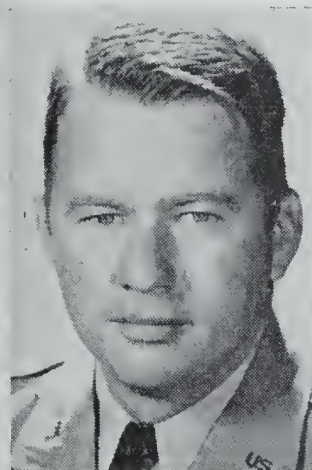
Dr. Wolfgang Roth from Bonn, Germany has joined the Arthritis and Rheumatism Research Laboratory here as Research Associate. He will carry out a program of work on the Chemistry and Structure of the Sialic Acids. He was formerly associated with Prof. J. Goerdeler at Rheinische Friedrich-Wilhelms Universitat, Bonn, Germany and received his Ph. D. in organic chemistry from this University in March 1958.



DR. CHARLES BUTTERWORTH JOINS MEDICAL CENTER STAFF

Dr. Charles E. Butterworth, Jr., recently joined the staff of the Medical Center as Instructor in the Department of Medicine. He received his A. B. degree at the University of Virginia and his M. D. from the University of Virginia School of Medicine. Dr. Butterworth is no stranger to the Center since he served his internship and residency here and, after a year in Korea, returned to spend an additional year as a Research Fellow in Hematology and another year of residency in the Department of Medicine. In 1953, Dr. Butterworth went into Army service and in 1955 was detailed to the Research Section of the Army in San Juan, Puerto Rico as head of the sprue research team. During his two year assignment in this area, he accomplished considerable research concerning sprue.

He is a member of the hematology study section of the Division of Research grants of NIH and is the author of several publications related to hematology.



DR. DON OLSON NOW WITH SPEECH AND HEARING CLINIC

Dr. Don Olson recently joined the staff of the Speech and Hearing Clinic of the Medical Center as Director of Speech Pathology. He received both his doctorate and Masters degree from Northwestern University. He came to Alabama from Evanston, Ill., where he was a staff clinician at Northwestern University while working on his Ph. D. there. Dr. Olson has done much aphasoid diagnostic work and is completing research in the field of cleft palate therapy and hopes to expand the work being done here in this field.



INTERIM HEALTH COMMITTEE TOURS MEDICAL CENTER

The State Legislative Interim Health Committee toured the Medical Center recently. This committee is traveling throughout the state visiting and inspecting medical and health facilities and will report to the legislature in May.

The committee, headed by Representative Karl Harrison of Shelby County, met with Dr. Robert C. Berson, Vice President in Charge of Health Affairs, Matthew F. McNulty, administrator of University Hospital, and Mrs. Kathryn Crossland, Director of Nursing, University Hospital, during the morning and then toured the grounds in the afternoon. They agreed that two important things are vitally needed—more trained nurses and adequate facilities for housing them, and improved care of indigent patients.

Other members of the health committee are Senator Walter C. Givhan of Safford, Representatives Kyser Leonard of Talladega, Sim Thomas of Eufaula and George Hawkins of Gadsden.



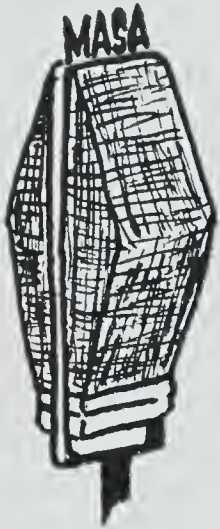
INTERIM HEALTH COMMITTEE—Shown above, during their morning discussion, are from left to right, Rep. Sim Thomas, Rep. Karl Harrison, Mrs. Kathryn Crossland, Matthew F. McNulty, Dr. Robert C. Berson, and Rep. Walter C. Givhan, as they look over material to be included in their report to the Legislature.

DR. STERLING EDWARDS SPEAKS AT CONFERENCE

Dr. W. Sterling Edwards, Assistant Professor of Surgery at the Medical Center, returned recently from the 44th Clinical Conference of the American College of Surgeons at Chicago, Illinois.

Dr. Edwards, along with other cardiovascular surgeons who attended the meeting, reported that synthetic fiber tubes have worked so successfully in replacing wornout or damaged arteries that blood vessel banks across the nation are closing down rapidly.

Synthetic grafts were first introduced in 1952 and they can be used to replace large ineffective arteries in almost any region of the body. New techniques used in the manufacture of the synthetic grafts have improved them so that they can be knitted, woven or molded into any desired shape. Dr. Edwards said synthetic grafts were less expensive to institutions that have maintained artery banks and the development of unexpected complications in human tissue grafts made several years ago.



DROUGHT IN THE GRASS ROOTS

E. L. BERNHART, M. D.

PRESIDENT OF THE STATE MEDICAL SOCIETY
OF WISCONSIN IN 1955

I chose for my subject today something which is very timely, I think. This being election year, something has bothered a lot of us due to the ineptness of many of us in our local areas.

The subject is "Drought in the Grass Roots."

Two months ago an important public spokesman in Wisconsin stated:

"The physician has more to lose before the legislature and the Congress than any other person in our society. Yet he contributes less in time and effort than any other in the support of candidates for public office."

This is a shocking statement. Can it be true?

This spokesman has been active in political circles for many years. His experience has come from the state and the national scene. He declared that his remarks were not limited to Wisconsin alone but could be generally applied across the nation.

Let me continue for a moment with what this man said:

He said, you physicians want to keep the chiropractor within his limits. You want the Congress

to go slow on social security expansion. You oppose compulsory social security coverage for physicians. You want free choice of physician under Medicare. You oppose government intervention in medical education. You oppose bureaucratic governmental medicine in any form. These are all sound proposals.

But the trouble with physicians, this man said, is that they do not seem to realize that while they are meeting to pass resolutions, the chiropractors, the quacks and the socializers are electing a legislature or a congress. It is the legislature which enacts the laws, and, to this date, no county, state or American Medical Association resolution has had the same effect.

By and large, he said, legislation is in the hopper and well on the way to passage when the physician wakes up. But he wakes up too late.

Let me illustrate again by an example from my own state. I choose a local example not because it is peculiar to my state but because some one here might be so naive as to believe that it could not occur in his state. I would not want to offend him.

At this time two years ago, about six months before the 1957 Wisconsin legislature convened, chiropractic groups, frequently accompanied by local businessmen and labor leaders, put their request to legislative candidates. Superficially it sounded reasonable to some one not familiar with the chiropractic threat. Their request went like this:

Read before the Conference of Presidents and Other Officers of State Medical Associations, San Francisco, June 22, 1958, and reprinted from its proceedings.

... The Wisconsin Legislature, in its good judgment, licensed chiropractic in 1925. This, of course, was in recognition of its effectiveness in the treatment of the sick.

... Since then, chiropractic educational requirements have been substantially increased. The applicant for chiropractic license must take a basic science examination. This assures the public of his competence.

... Despite this, the chiropractor and, more important, the patient who demands his services are discriminated against. He is denied the benefits of the workmen's compensation and public assistance programs. The only reason for this is the opposition of the "medical trust."

... All we as chiropractors ask is the opportunity to serve our patients, and the legislation we propose will permit nothing more.

The legislator, receiving this information in the presence of a group of friends and neighbors—and voters—and without the benefit of all the facts, was likely to make decisions, if not commitments. By the time the legislative session rolled around many of these same legislators, when given the facts, would have liked to change their position. But they couldn't change because of commitments already made to constituents.

You may feel that the legislator had the responsibility to seek out the physician, or at least to take no position until the whole story was told. Perhaps this is so, but you know that in the world of practical politics it doesn't work that way.

What's wrong in the legislative arena? Why is it, as one columnist puts it, that medics are so frequently caught with their stethoscopes plugged? Why is it that medicine so frequently has to resort to crash programs of last-minute legislative pressure to delay or defeat anti-health measures or obtain support for its own public health proposals?

Last January the Journal of the History of Medicine and Allied Sciences carried a most interesting report on the genesis and impact of the medical lobby since 1898. This paper traced the factors leading to the organization of the AMA Committee on National Legislation. The Committee was established in 1898 not only as a negative force to oppose antivivisection bills and higher postal rates for medical journals but to support national sanitary laws, better medical care for the armed forces, and higher standards of medical education.

By 1906 the AMA had successfully battled with President Theodore Roosevelt and his administration to provide better medical care for workers constructing the Panama Canal; it had triumphed over the powerful distillers' trust and the right wing of the Republican party in order to pass the

Pure Food and Drug Act of 1906. And now to quote a very important sentence: "In a seven year period a politically powerless profession was organized into one of the most politically potent grass roots lobbies in the United States."

In the years since that time few lobbies have been the subject of more controversy than that of the medical profession. Its determination and political skill have won the respect of both its friends and foes. And I dare say that no lobby has ever been more consistently dedicated to public service through the improvement of public health.

Despite all this, medicine appears suddenly to be faced from every quarter with charges that the physician is doing little to support candidates for public office and that his dilemma in the legislative halls is of his own making.

What kind of drought has spread over the grass roots of American medicine? What kind of reclamation projects are needed to restore vigor to these dead and dying grass roots? Is there anything more important in the interest of preserving and improving the quality of medical care?

Perhaps the writings of one experienced newspaper reporter tell the story.

Commenting on the triumph of a chiropractic bill over the opposition of the local medical society the reporter said:

"The chiropractic lobby was almost a clinical example of the pressure group in action in the legislature. Literally scores of chiropractors left their offices and clinics to participate.

"The doctors for their part did little of such pressuring. They have a competent and experienced counsel who presented the issues as the doctors saw them. The fact that he found himself on the losing side of the roll call does not reflect upon his professional or political skill any more than it suggests the merit of the question. What it does suggest is that doctors must fight fire with fire.

"To the conscientious physician working in his home town and engaged heavily in watching over the interests of his patients, it may appear strange that he should also be obliged to participate in the business of politics by communicating with his legislative representatives and explaining the merits of pending bills as they strike him. Yet the practical world of politics is a cruel one and it demands exactly such activity from the physicians as it demands from lawyers, dry cleaners, farmers and merchants when issues striking at their fundamental concerns arise in the legislative arena."

Now there must be a reason why the medical profession finds itself confronted with these situations so frequently.

And there is a reason.

We, the presidents and officers of our state medical societies, have simply not laid the facts on the line to our members. Our members are not really aware of the danger.

We ourselves have become too complacent with the illusion that somebody will do something when the time comes—that resolutions rightly timed will turn the tide—that the legislature or the Congress can be persuaded by honest and skilful lobbying—that a well documented, strong appeal before the committee hearing will cause the law-making body to do what it should.

Nothing could be further from the truth.

Medicine is failing to protect itself and failing to protect public health by forgetting the first fundamental of grass roots politics—personal contact. True, we have done a great deal of grass roots *talking* at medical meetings as far back as I can remember. But for some reason our talk seems to have been nothing but hot air. Without some grass roots *action* all of our talking is worthless.

I think the medical profession must stop looking for excuses to stay out of politics. I would not say to you that you should enter the ring with chiropractic in the opposite corner. I would by no means suggest that the practicing physician spend his working days from Tuesday through Thursday in the legislature. I would not think of inviting an entire county medical society to swarm over the legislative halls. Physicians are taking care of sick people. The many demands made upon them for individual and community health must and should come first. It is not necessary and should never be necessary for physicians to become residents in the halls of Congress or the state legislatures.

I *am* saying that it is the duty of medicine, and by that I mean every individual physician, to provide information, to provide facts, and to do it honestly and fairly, to every public official—municipal, county, state and national. And don't forget that politics begin in the city council and the county board. Many of the men who move into state and national legislative positions get their start in local offices. That is where they form their first impressions of physicians.

The profession is constantly fending off the quack and cultist. It is constantly under severe attack for the increased costs of "medical care."

Invariably the legislator's knowledge of the difference between cultism and professional health care is meager or even non-existent. Few of the critics of the costs of medical care have made any effort to distinguish the costs of hospitalization and ancillary services from the costs of physicians' services.

Medical men know the truth about these problems. However, the facts are without value unless they reach the legislator.

Our failure to convey them carries the probability of severe penalty. That penalty, of course, is punitive or thoughtless legislation resulting from ignorance of those facts.

I think physicians should stop being afraid to speak out in public. Official government statistics tell us that there are some 5,000 chambers of commerce and some 10,000 luncheon and service clubs in America. There are thousands of voluntary and public groups of various types.

One would assume that the average physician must belong to many of these different organizations. If so, it would seem that the physician would be highly informed on many facts of our political life and some of the special needs in the public health field. It would seem that by his very presence in these groups he should occasionally be so frightened or angry—or even so patriotic—to have long since roused himself in protection of his profession and his family and the public health from some of the threats that make their appearance there.

What's wrong? Why hasn't he? Perhaps the answer can be found in a survey that one state medical association conducted among its members as to their participation in public and civic affairs. Among other things the survey revealed that only 26 out of every 100 physicians belong to a chamber of commerce. Only 33 out of every 100 physicians were members of Kiwanis, Optimists, Elks, Rotary or Lions. And only 15 out of every 100 physicians were serving on a board of health, board of education, as coroner, on the county board, county health committee, county public welfare committee, a city council or village board or as mayor or alderman. Do these sound like the statistics of community leadership for which the medical profession has so great a reputation?

I think our legal counsel at the national and state levels must turn the emphasis from what we can't do in politics to what we can do if we want to. Labor is subject to exactly the same restrictions against political action as medical organization yet look what it has done in building an influential legislative program within the last ten years. Business is another segment of society in which political action is subject to the same restrictions as would apply to medical organization. Yet look at its activity and influence not only on behalf of its own interests but in the interests of the people as a whole.

I would say to you that medicine and the care of the sick and public health are not Republican issues. They are not Democratic issues. The fun-

damental concept of medicine is to increase its capacity to serve the sick and to protect the healthy. One of its major obligations is to protect the sick from false hope, unnecessary expense, and waste of time. There are champions of these principles among both Republicans and Democrats.

But yours, doctor, is the responsibility to assure that your legislator is strong and intelligent in his conviction. The physician must know his legislative candidates. He must furnish them with information. And he must assist the worthy candidate of whatever party in his effort to achieve public office.

There is one more thing I would have you do. Right now in each congressional district a half dozen political leaders in each party are deciding who shall run for Congress. The same thing is going on in every legislative district in every state in this Union. An equal number of leading physicians, if they really cared and if they really represented the medical profession, could exert a strong influence on this selection and on who gets elected. I would wager that few physicians know or even care about who is running for the next legislature or the next Congress. As a result, candidates committed to quack and cultist philosophies and to grandiose socialistic schemes are being designated for nomination. They will be elected to office to get special favors for the special groups who organize to put them there. Oddly enough, these groups are small minority groups, often smaller than medicine itself.

Then after the election, medicine, through its thousands of local societies, will be called upon to make a last ditch effort to present the validity of its program to legislators already pledged to vote against it. Does this make sense?

Let me illustrate the problem.

Only a month ago a state gubernatorial candidate embarked on a 1,600 mile campaign swing involving 15 to 20 meetings. At every meeting there were one or more chiropractors present. This candidate reported the chiropractors made it a point to introduce themselves, express their interest in his candidacy, their desire to render assistance and make a few brief statements about their viewpoint on health matters. At not a single meeting was there a physician present. This legislator suggested that the least the physicians could do would be to invite the legislative candidates of both parties to county medical society meetings.

Let me give you another example:

A congressional candidate of my acquaintance is a man of modest means and out of necessity has to turn to interested citizens of his district for assistance. A physician in this district was prevailed upon to undertake efforts among the profession to

assist the campaign in a financial way. The physician, after two weeks of intensive campaigning among his fellow practitioners, was forced to report that he had not collected a single dollar.

Gentlemen, this was the response of the medical profession to a man whose support for public health and medicine has never wavered!

How long can medicine expect to keep its legislative friends in any party if it does not accept the responsibility of citizens for participation in the most basic of democratic processes—the selection and support of competent, well qualified and well informed legislative candidates.

If the medical men of America, with their myriads of contacts through organizations of every type, will not see to it that men are elected, committed to fight quackery and cultism, committed to improving public health, committed to oppose compulsory medical schemes, who else will?

No one! The medical leadership—that means you and me—must accept at least part of the blame for this drought in the grass roots. Relief is in sight only if every physician—not a select few—but every physician turns on the sprinkling system of person-to-person contact.

Then—and only then—can the nourishing waters of personal interest, of factual information and of considered judgment strengthen the legislative representative in what is right and just for medicine and public health.

Rabbit Fever—If you skin or clean wild animals, you may be in danger of acquiring rabbit fever.

According to October Today's Health, published by the American Medical Association, rabbit fever (tularemia) is one of 83 diseases of animals transmittable to man.

The disease is common in rabbits, field mice, opossums, squirrels, coyotes, skunks, and other small wild animals. It is fatal to the animals.

If an animal seems unusually tame or runs sluggishly when flushed, he may have tularemia, and hunters should be wary of killing and taking the animal home.

The article said that hunters, housewives, and vendors who skin and clean infected animals can acquire the disease through an abrasion or even apparently unbroken skin.

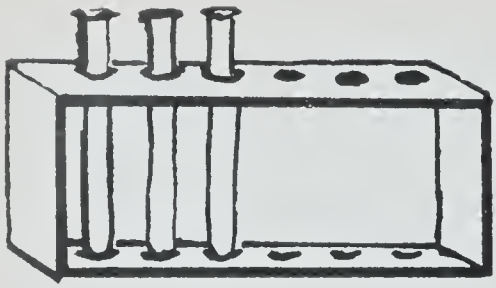
Symptoms in humans include headache, chills, fever, general weakness, backache, joint pains, and prostration.

Antibiotics can cure the disease, but the column listed certain precautionary procedures which include:

—Wearing rubber gloves when skinning animals.

—Washing blood from the skin with plenty of soap and water followed by the use of a disinfectant.

—Calling your doctor and going to bed if you think you have tularemia.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

PROTECTING ALABAMA'S WATER RESOURCES

Several weeks ago Alabama newspapers carried stories about the discovery of large numbers of dead fish in river waters near Demopolis. It appeared that something which was being introduced into the water was killing the fish. Investigation revealed that mechanical failure of a disposal system of an industrial plant was permitting waste to enter the river at an uncontrolled rate. The waste, non-injurious when released gradually, was entering the water in large enough quantities at one time to poison the fish. Measures to correct this situation and to prevent its recurrence were carried out immediately.

Responsibility for investigating this and any other occurrence involving water pollution and for making certain that corrective action is taken rests with the Water Improvement Commission, Alabama's water pollution control agency. The Commission was created by act of the Legislature in 1947. It resulted from the joint efforts of health authorities, sportsmen, conservationists, municipal officials and industrialists. These far-sighted citizens realized that protection of the public health, continued growth and development of industry, conservation of wild life, and availability of water for agriculture, recreation and other uses were all dependent on protection of water resources from pollution. They knew that the abundance of Alabama's water resources might become more myth than reality unless steps were taken to insure that water was made and kept usable for the many purposes it must serve.

Operating first as an advisory body, the Commission was granted regulatory powers by legislation enacted in 1949. The law was further clarified and strengthened in 1953. This legislation directs that the Commission concern itself solely with the preservation of water quality. No jurisdiction over the uses to which water is diverted is granted.

The Commission's first undertaking was a study of the state's water resources. Two mobile laboratories were utilized in this study during which samples from every stream of any consequence were analyzed for physical, chemical and bacteriologic characteristics. At the same time, information was compiled on public water supplies, sewage disposal facilities and industrial wastes. The comprehensive report of this study has been the basis for the Commission's program.

The study revealed that domestic sewage is the major source of pollution of Alabama's waters. The problem of safe disposal of domestic waste is continually compounded by growing urbanization and increasing population. Obviously, the problem can be solved by the use of sewage treatment plants. Although municipal officials and health authorities have long seen the need for such facilities, construction has not nearly kept pace with the need, largely because of financial problems. Adequate financing for such construction can present a formidable problem, particularly for small communities. Construction of sewage treatment facilities has been given great impetus by the establishment of the U. S. Public Health Service's grant-in-aid program. Federal funds to help with the construction of sewage treatment facilities first became available in the latter part of 1956. This program is administered by the Water Improvement Commission which reviews and approves plans and assigns priorities for construction. Favorable results of this program have already become apparent, and its impact will undoubtedly be even more evident within the next few years.

There are many industries in the state which discharge large quantities of waste into streams, but industrial waste has never been a problem of the same proportions as that of domestic waste. In its program to eliminate stream pollution, the Water Improvement Commission has had the cooperation of industry. In those industries where waste disposal has presented difficulties, the Commission and the industry involved have worked together in an effort to arrive at a solution satisfactory to all concerned. The Commission offers consultative services to both existing and prospective industries on any problems relating to waste disposal.

The Commission is a 15-member body. The four ex-officio members are the State Health Officer, the Director of the Department of Conservation, the Commissioner of Agriculture and Industries and the State Geologist. Alabama Polytechnic Institute and the University of Alabama each have one representative appointed by officials of the schools. The remaining nine members represent agencies, groups and industries having a major interest in the preservation of water quality. Each of these members is appointed to a six-year term by the Governor from nominations made by the organization the member represents. The State Health Officer and the Director of the De-

DEPARTMENT OF HEALTH

partment of Conservation are designated by law as the chairman and vice-chairman, respectively. The Director of the Bureau of Sanitation, State Health Department, serves the Commission as technical secretary, and the State Health Department is the administrative agency. The Commission meets twice a year to evaluate the work which has been done and to develop plans and policies.

Policies, plans and regulations formulated by the Commission are carried out by a technical staff. The staff's activities include reviewing and processing applications for permits to discharge waste, reviewing and approving plans for sewage treatment plants, administering federal-state co-operative programs, investigating and inspecting sewage and industrial waste treatment facilities, performing laboratory studies of streams and industrial wastes, consulting with industries, and co-operating with federal, state, county and city officials and agencies dealing with problems involving pollution.

The Commission has recently released a publication which presents its program and describes operations during the 11 years it has been in existence. Entitled "Streams of Progress," the foreword of this report reads: "The Water Improvement Commission is keenly aware of its responsibility to maintain the fine quality of Alabama's waters for domestic, industrial, agricultural and recreational uses.

"To fulfill this obligation the Commission attempts to exercise its powers in a reasonable manner and to apply its regulations impartially in all cases. With pride in its past accomplishments, and a desire to be of greater service in the future, the Commission pledges its continued efforts to preserve the purity of Alabama's streams as a means of helping to assure the future health and prosperity of our people."

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

October 1958

Examinations for diphtheria bacilli and Vincent's	124
Agglutination tests	581
Typhoid cultures (blood, feces and urine)	639
Brucella cultures	5
Examinations for malaria	40
Examinations for intestinal parasites	3,146
Darkfield examinations	3
Serologic tests for syphilis (blood and spinal fluid)	28,157
Examinations for gonococci	1,769
Examinations for tubercle bacilli	3,468
Examinations for Negri bodies (smears and animal inoculations)	190
Water examinations	2,134
Milk and dairy products examinations	4,414
Miscellaneous examinations	837
Total	45,507

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS
1958

	Sept.	Oct.	E.E.* Oct.
Typhoid and paratyphoid	6	9	5
Undulant fever	0	0	2
Meningitis	8	3	6
Scarlet fever	28	65	64
Whooping cough	8	7	40
Diphtheria	1	8	58
Tetanus	2	1	4
Tuberculosis	177	174	207
Tularemia	0	1	1
Amebic dysentery	0	3	2
Malaria	0	0	4
Influenza	19	53	69
Smallpox	0	0	0
Measles	31	28	35
Poliomyelitis	8	7	28
Encephalitis	2	1	1
Chickenpox	5	1	13
Typhus fever	5	1	2
Mumps	13	12	25
Cancer	329	366	393
Pellagra	0	0	1
Pneumonia	104	77	114
Syphilis	96	125	208
Chancroid	3	1	5
Gonorrhea	334	414	349
Rabies—Human cases	0	0	0
Positive animal heads	12	15	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.



BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS AND COMPARATIVE DATA, AUGUST 1958

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During August 1958			Rates* (Annual Basis)		
	Total	White	Non- White	1958	1957	1956
Live births	7742	4750	2992	28.6	27.3	29.8
Deaths	2151	1328	823	7.9	7.8	8.6
Fetal deaths	158	66	92	20.0	19.2	21.0
Infant deaths—						
under one month	193	114	79	24.9	27.1	20.4
under one year	241	130	111	31.1	33.5	27.0
Cause of Death						
Tuberculosis, 001-019	23	9	14	8.5	11.2	13.5
Syphilis, 020-029	7	3	4	2.6	1.1	1.9
Dysentery, 045-048	2		2	0.7	0.4	2.3
Diphtheria, 055					0.4	
Whooping cough, 056						
Meningococcal infections, 057	1	1		0.4		
Poliomyelitis, 080, 081					0.4	1.2
Measles, 085						
Malignant neoplasms, 140-205	277	199	78	102.2	102.5	105.0
Diabetes mellitus, 260	32	21	11	11.8	7.8	13.9
Pellagra, 281	1	1		0.4	0.4	0.8
Vascular lesions of central nervous system, 330-334	316	187	129	116.6	110.3	114.7
Rheumatic fever, 400-402	2	1	1	0.7		1.2
Diseases of the heart, 410-443	704	454	250	259.7	245.6	278.0
Hypertension with heart disease, 440-443	109	43	66	40.2	43.6	54.1
Diseases of the arteries, 450-456	38	23	15	14.0	18.6	20.5
Influenza, 480-483	3	1	2	1.1	0.7	1.9
Pneumonia, all forms, 490-493	47	24	23	17.3	18.3	16.6
Bronchitis, 500-502	1	1		0.4	1.5	0.8
Appendicitis, 550-553	1		1	0.4	0.7	1.5
Intestinal obstruction and hernia, 560, 561, 570	13	10	3	4.8	3.0	3.9
Gastro-enteritis and colitis, under 2, 571.0, 764	14	2	12	5.2	4.5	6.6
Cirrhosis of liver, 581	15	11	4	5.5	3.7	6.6
Diseases of pregnancy and childbirth, 640-689					5.4	5.1
Congenital malformations, 750-759	29	21	8	3.7	5.3	3.1
Immaturity at birth, 774-776	71	39	32	9.2	9.0	6.1
Accidents, total, 800-962	142	103	39	52.4	64.1	69.1
Motor vehicle accidents, 810-835, 960	56	48	8	20.6	32.8	36.7
All other defined causes	344	191	153	126.9	119.2	136.7
Ill-defined and unknown causes, 780-793, 795	68	26	42	25.1	26.5	32.4

Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.



BOOK REVIEWS

Hormone Production in Endocrine Tumors. Ciba Foundation Colloquia on Endocrinology, Vol. 12. Edited by G. E. W. Wolstenholme, O. B. E., M. A., M. B., B. Ch.; and Maeve O'Connor, B. A. Cloth. Price, \$9.00. Pp. 295, with 58 illustrations and cumulative index to volumes 1-12. Little, Brown and Co., Boston, 1958.

This book is the twelfth volume in a series of conferences on hormone research which have been designed and financed by the Ciba Foundation. The present volume contains an index to all twelve volumes. This book is an excellent example of a number of books published in the last 5-10 years which result from conferences supported by various medical foundations. They are dedicated to the purpose of allowing presentation and free discussion on very advanced areas of scientific research. Each paper is discussed by a panel of competent authorities in that particular field.

The most exciting to this reviewer is that section on the relations of the pituitary to melanomas through its secretion of MSH. There are other equally intriguing papers on abnormal iodination associated with cancer of the thyroid, biochemistry of cystic ovaries, and adrenal tumors.

This is an excellent and stimulating series of papers for those interested in this particular field.

E. Fred Campbell, M. D.

Review of Physiological Chemistry. By Harold A. Harper, Ph. D., Associate Professor of Physiological Chemistry, Univ. of California School of Medicine, San Francisco; Biochemist Consultant to Metabolic Research Facility, U. S. Naval Hospital, Oakland; Biochemist Consultant to St. Mary's Hospital, San Francisco. Sixth edition. Paper. Price, \$4.50. Pp. 376. Lange Medical Publications, Los Altos, Calif., 1958.

This is an excellent general review of physiological chemistry. This is an easily read book. The subject matter is well organized and presented with numerous structural formulas of the chemical equations. The emphasis in this book is on the physiological chemistry of the body. However, there is sufficient clinical interpretation to relate the physiological chemistry to clinical medicine. This book is recommended for medical students and for clinicians with a particular interest in this field.

Walker B. Sorrell, M. D.

Principles of General Surgical Management. By H. A. F. Dudley, F. R. C. S. E., Lecturer in Surgery, University of Edinburgh; with the assistance of B. C. Paton, M. R. C. P. E., The Royal Infirmary of Edinburgh; I. F. MacLaren, F. R. C. S. E., The Royal Hospital for Sick Children, Edinburgh; I. B. Tait, F. R. C. S. E., St. Mary's Hospital, London; and G. F. Murnaghan, F. R. C. S., F. R. C. S. E., The Western General Hospital, Edinburgh. With a foreword by John Bruce, C. B. E., T. D., F. R. C. S. E., Regius Professor of Clinical Surgery, University of Edinburgh. Cloth. Price, \$6.50. Pp. 203. The Williams

& Wilkins Company, Mount Royal and Guilford Avenues, Baltimore 2, Maryland, exclusive U. S. agents, 1958.

This is a well written book and although prepared primarily for the house surgeon, or resident is equally interesting as a source of reference and review for the practicing surgeon.

It is concise and there is a very practical approach to the various subjects which are presented. It deals mainly with the preoperative evaluation and preparation and the postoperative care and complications of the surgical patient. However, there are very fine chapters on the recognition and management of shock, the urinary tract, and practical procedures (endotracheal intubation, tracheostomy, paracentesis, thoracentesis, etc.).

This book can be recommended without reservation for the resident or student in his clinical years and as a reference for the practicing surgeon.

Edwin B. Kent, M. D.

Handbook of Medical Treatment. Edited by Milton J. Clatton, M. D., Director of Medical Institutions, Santa Clara County, Calif.; Superintendent of Santa Clara County Hospital, San Jose, Calif.; Assistant Clinical Professor of Medicine, Univ. of California School of Medicine, San Francisco; Sheldon Margen, M. A., M. D., Associate Research Biochemist, Dept. of Physiological Chemistry, and Clinical Instructor in Medicine, Univ. of California School of Medicine, San Francisco; and Henry Brainerd, M. D., Professor of Medicine, Univ. of California School of Medicine, and Physician-in-Chief, Univ. of California Hospitals, San Francisco. Sixth edition. Fabricoid. Price, \$3.50. Pp. 569. Lange Medical Publications, Los Altos, California, 1958.

It is difficult for this reviewer to assess the value of this handbook of medical treatment. It seems that if one is practicing medicine in a field where treatment has to be gotten from such a handbook the physician is out of his field. One cannot criticize the thoroughness nor the conciseness with which each section is written. One can criticize the fact that such systematized treatment schedules somewhat take out of context the particular disorder being treated. It also tends to emphasize a dogmatic approach to treatment of certain conditions without the flexibility which is so often necessary in the care of a seriously ill patient. With no intent to disparage the accuracy or conciseness of this book, it would seem to this reviewer that it is somewhat superfluous to the present day medical reading shelf.

E. Fred Campbell, M. D.

ANNUAL SESSION
DINKLER TUTWILER HOTEL
BIRMINGHAM
APRIL 9, 10, 11, 1959

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

January 1959

No. 7

THE ROLE OF THE DOCTOR IN ATOMIC WARFARE

LT. COL. DAVID I. LIVERMORE, USAF (MC)

When we speak of the role that a physician in civilian practice of medicine would perform if this nation were attacked by an enemy, we are speaking of an unprecedented situation. Many generations have passed since a foreign enemy has inflicted significant damage on the continental United States. Since, in the past, distance was a serious impediment to the effective prosecution of a war, our home land has been relatively immune to the onslaughts of those enemies who have chosen to wage war against us. Technologic developments have altered this. Distance has lost its significance and modern weapons can wreak incomprehensible fury.

If we have no precedents, then it is well for us to consider carefully that which we can observe and thereby seek a foundation for reasonable conclusions. Until we see credible evidence to the contrary, we as a nation believe that international communism is still intent upon subjugating the free world to its vicious tyranny. At the command of this totalitarian organization there exists a mighty military force equipped with highly efficient and highly destructive weapons of war. It is within the power of a small, dictatorial group of men to restrain or to unleash this military might. Our nation, in conjunction with its allies, maintains a powerful military striking force in the belief that this serves to deter an aggressor from launching an attack for fear of the havoc that he would bring down on the heart of his military strength in his own homeland.

However, the destructive potential of a counter-attack is only one part of the story. For the other part we must consider the basic reason for waging war. This is the desire of one power to impose its will upon an adversary. In order to do this it must either destroy the ability to resist or break the will to resist. If an aggressor, while exposing itself to a highly destructive counter-attack, cannot suc-

cessfully disrupt the social fabric of the nation attacked in the early stages of a thermonuclear war, it might thereby inaugurate its own destruction. A nation with the capability to survive may rise from the blow and continue to prosecute the war to the detriment of the aggressor. Therefore, the ability of our nation to survive an attack is a significant element in our posture of deterrence.

Although in such an attack the destruction of material things might be highly significant, the loss of multitudes of people as casualties of war is of prime importance in terms of national survival. Our administrative organization whose responsibilities are the prevention of this loss and the firm support of our social and civil structure in the face of thermonuclear attack is the Civil Defense. From this we can see that effective civil defense is not only a humanitarian system devoted to individual survival but, of far greater importance, it is a strong element in support of national survival.

At this point we may begin to see the role of the physician assuming palpable form. Since national survival obviously requires that the population stay alive, the medical profession has a real responsibility in civil defense. The concept of maintaining health as well as treating injury and disease is fundamental to modern medicine. The situation, of course, is unique, and the specific techniques for surviving the effects of nuclear weapons are not yet a normal constituent of the medical school curriculum. However, despite the aura of mystery which has surrounded nuclear weapons in the past because of security classifications and the horrors of nuclear physics and higher mathematics, none of these becloud the information required by the physician. It is no more necessary to know the inner workings of an atom bomb to treat casualties produced by its detonation than it is to know the make of the automobile which struck the patient for us to treat the fractured femur.

The primary forces from a nuclear weapon

Read before the Association in annual session, Montgomery, April 17, 1958.

which can produce casualties are blast, heat and radiation. These weapons do not produce any new pathology. Of course, damage produced by radiation has not previously been a product of military weapons. The greatest impact on medical support is a product of the increased number of casualties in a decreased increment of time. This, of course, has the potential of overtaxing the medical staff as well as medical supplies.

The responsibilities of the physician may then be divided into two time phases. These might be termed the "pre-attack" phase and the "post-attack" phase. The pre-attack phase begins now. Our responsibility to our country demands that we increase our knowledge of weapons effects so that we can advise those in positions of executive authority in our communities. Through an understanding of the mechanisms by which blast, heat and radiation attack the human body, more effective protective measures can be devised. This might well be an area of special interest to the surgeon, the radiologist and the pathologist. Their knowledge can be of great value in advising architects and structural engineers. The fact that a building is capable of withstanding heat and blast does not mean necessarily that its design will also protect the people inside against these same phenomena. Although radiation is not likely to damage a building, if that building is properly designed it can give great protection against radiation to its occupants.

A very significant factor related to the preparation of plans involving large numbers of people is too frequently disregarded. Furthermore, this factor is one of keen medical interest—the response of people to emotional stress and to physical danger. A written plan prescribing the acts and duties of the population of a given community might be a writer's masterpiece. On the other hand it becomes a document of little value if we can predict in advance that the people involved will not follow its provisions. A number of individuals and groups, including the National Research Council, have made extensive studies of group response to stress. These studies, many of which have appeared in medical literature, indicate that under certain stimuli it is possible to predict certain patterns of behavior by different segments of a population. This field of interest has attracted psychiatrists more than the followers of other medical disciplines. Thus we find an aspect in the problem where the psychiatrist can make most significant and fruitful contributions.

Although it is an element of good citizenship for all of us to acquaint ourselves with national and international problems and to form our own personal opinions, determining which community is and which is not a likely military target is hard-

ly a physician's responsibility. Therefore, we must recognize that the plans for protection of the populace will vary from one location to another. However, one feature of thermonuclear warfare is a common threat to all localities. This is radioactive fallout.

When a nuclear weapon of the fission type is detonated, the blast—the effect for which the bomb is exploded in the first place—is derived from the energy released by breaking apart the heavy atoms of uranium or plutonium. The new atoms formed by this cleavage are unstable. In order to achieve stability they must give up energy by emitting radiations. This they do in several different stages until they become stable. The many different kinds of fragments do this at different speeds. Those which reach a stable state more quickly give off radiations most rapidly at first, but then they become non-radioactive earlier. Therefore, radiation is most intense soon after the detonation but falls off fairly quickly during the early hours. This process of radioactive decay gives us a factor of time which, if we recognize it, can be used to work in our favor. If a bomb is exploded at or near the surface of the ground, great quantities of soil, rocks or any other solid material are drawn up into the cloud. The radioactive fission fragments are trapped in this debris and carried back down to earth. Their distribution will depend on the direction and distance they are carried by the winds in the upper atmosphere and from a high-yield bomb may cover hundreds to thousands of square miles with a significant amount of radioactivity. Because an attack on this country would in all likelihood use a large number of bombs, it becomes obvious that no community should consider itself immune to this particular hazard.

As with so many problems, a clear understanding and analysis of the hazard will lead to reasonable solutions. In this instance we are considering a large quantity of particulate matter scattered over a large area. Each particle may be a source of danger to the human body because of its radioactive emission. Of major significance in the early period after the distribution of this fallout material are the gamma rays. These, in most aspects, have the same physiologic effects as x-rays. They can penetrate human tissue and give up their energy by production of ionization in tissue cells. The quantity of damage to the body is related to the quantity of this energy absorbed. The unit of dose measurement is the roentgen and the total dose is the product of radiation intensity and duration of exposure. Radiation sickness is not an all-or-none affair but exists on a continuum where the total dose may be less than is clinically detectable, progressing to a sickening dose, a potentially lethal dose, and finally an overwhelming dose. From

this we can understand that shortening the time of exposure to a given radiation intensity will reduce the dose received. Again, as with x-rays, the gamma radiation intensity can be reduced by interposing dense materials between the source and the human body. These two factors, reducing the duration of exposure and interposing dense shielding materials, are used by the radiologist in his daily activities to protect both his patients and himself from unnecessary exposure. But where the radiologist localizes and controls the hazard, in a fallout area we must turn the situation inside out and prepare a confined area of safety in a region of generalized hazard. Since soil, rock and concrete are inexpensive and effective shielding materials, a deep basement under a solidly built concrete or masonry building should offer protection against rather high levels of outside radiation intensity. However, protection against subsequent air-borne radioactive particles in fallout presents an additional problem.

What should be the role of the physician in this situation? To what extent should he be exposed to fallout radiation in the care of his patients? Although blast injuries and burns may not exist in his area, the presence of fallout radiation will certainly not hinder the inexorable progress of a normal obstetrical labor. The customary medical and surgical emergencies will not be suspended during the period of danger. But, on the other hand, would a dangerous or lethal exposure to the physician be justifiable for him to attend a patient suffering from an acute coronary occlusion? The physician lives with a tradition of service to humanity even at the expense of risk to his own person. However, the ultimate survival of the nation as a whole demands that he, as an individual, stay alive and healthy. The Principles of Medical Ethics as promulgated by the American Medical Association states: "The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community."

By adequate prior planning, the total medical potential of a community can be allocated to serve the patient in urgent need and still conserve the vital medical resources for the community as a whole. For example, the physicians of a community could be strategically located at sheltered areas, pre-stocked with essential medical supplies and the patients brought to them. With adequate advance planning these medical shelters can be spread around the community so that no patient need be exposed to the outside radiation dose for more than a few minutes. Such a single exposure

to the patient would be quite acceptable, whereas repeated similar exposures to the physician moving from one patient to another might soon render him non-effective and remove him from further service to the community as a whole. Judicious use of telephone communication likewise can serve to give medical instructions without exposure of either patient or doctor. Knowing that the decrease in radiation intensity is most rapid during the early hours after fallout formation and deposition, we can use this knowledge to decide whether delay in seeing the patient is more acceptable than the exposure to the more intense radiation in the early hours.

The question is often asked, "What is a safe level of exposure? What is an acceptable dose rate at which one can venture out-of-doors?" There can be no single answer. The risk of exposure must be weighed against the importance of the particular mission. Although estimates of probable dose rates to be expected in a certain area may have value for planning purposes, actual radiation intensity can be determined only by people trained in radiation monitoring and having instruments in their possession to make readings at that time. And only then can a determination be made as to how important the mission may be and how much exposure an individual may be permitted to receive.

In summary, we see that it is certainly possible by careful forethought to provide essential medical care to the community in the presence of radioactive fallout; and, further, to conserve the medical strength for the continuing support of the community. Each physician might well refresh himself on the fundamental techniques of management of traumatic injuries; and prepare himself for the probability that such procedures must be done under austere conditions with limited medical supplies.

The incidence of polio has been reduced a dramatic 85 per cent in the three-year period ending last year, according to the publication "Patterns of Disease," prepared by Parke, Davis & Company for the medical profession.

Since 1955, the number of polio cases has dropped for three consecutive years, from 28,985 cases in 1955, when the vaccine program was begun, to 5,485 in 1957.

Studies have shown that years of low polio incidence usually follow high ones. The only previous period during which incidence declined for three consecutive years was 1917-1919. Peak year for polio incidence in a 13-year period beginning in 1945 was 1952 in which 57,879 cases were reported.

Data collected after the introduction of vaccine on a large scale indicate that the vaccine has been responsible for a reduction in the incidence of paralytic polio, the ailment's most withering form. Through October 1957, 97 cases of paralytic and 427 cases of non-paralytic polio were reported among 28 million persons who had received the full three-dose course of vaccine.

RUPTURE OF THE SMALL BOWEL SECONDARY TO LYMPHOSARCOMA

S. W. WINDHAM, M. D.

Dothan, Alabama

Although general or multicentric lymphosarcoma is well known, focal or unicentric lymphosarcoma has only recently become well understood. Ackerman and del Regato,¹ in their textbook on cancer, state lymphosarcoma is often seen first as a generalized process but a certain unknown but increasing proportion of cases has been reported with a definite focus of origin. Sugarbaker and Craver,⁹ in reviewing 196 proven cases of lymphosarcoma, found that 5.5% arose in the digestive tract, the stomach being the seat of origin in more than half the cases.

The exact incidence of lymphosarcoma of the small bowel is not known. Menne, Mason, and Johnson⁶ found two cases in 40,000 pathologic examinations. Their review of the literature in 1942 yielded only 376 authentic cases of lymphosarcoma of the small intestine. Feldman³ collected 58 cases of sarcoma of the small bowel from 104,621 autopsies. Richman, Goodman, and Russi⁷ described 13 cases seen during a 17-year period at the Presbyterian Hospital in New York. Irvine and Johnstone⁴ reported 37 primary sarcomata of the gastro-intestinal tract, 17 of which involved the small bowel. These cases were seen in the department of pathology of the Western Infirmary in Glasgow, Scotland in a period of eight years from 1946 through 1953. In the small intestine the ileum is the most common site and the duodenum the least common. Lesions seem to parallel the richness of the lymphatic tissue in the bowel. Lesions have been reported in the colon, especially in the rectal region. Most of the patients have been in the earlier decades of life, especially between the ages of 20 and 40. Neoplasm of the intestinal tract in an infant or child should be regarded as lymphosarcoma until proven otherwise. Thus, it can be appreciated that individual surgeons rarely see a large number of these cases but if all single cases to small groups were reported, the incidence would be found higher than the rather sparse literature would lead one to believe. During a five-year period, I have had two cases brought to my attention because of perforation.

The radiologic findings in lymphosarcoma of the small intestine have been emphasized in medical literature more than any other phase of the

disease. Deeb and Stilson,² emphasizing the type of pathology present, point out that the predominant feature of the disease is that of obstruction. The pathology produces a destruction and obliteration of the mucous membrane pattern of the bowel resulting in stiffening of its wall and an absence of peristalsis. On the other hand, Martin and Friedell⁵ state that lymphosarcoma is probably the only lesion which may produce an increase in size of the bowel lumen at the site of disease. Richman, Goodman, and Russi⁷ point out that the entire small bowel may be involved. All writers call attention to dilated segments, usually retaining barium for sometime, while it progresses through the uninvolved bowel at a normal rate. Constricted areas showing concave defects along the walls, as if from compression by nodular masses, have been discovered. Frequently there is no sharp delineation between involved and normal bowel. Shanks⁸ states that the process may be localized (this is the common form) or rarely diffuse and tends to infiltrate the outer coat before involving the mucosa and at first causes little stenosis. Ullmann and Abeshouse¹⁰ refer to accompanying dilation in the bowel. It has been suggested that the growth spreads from the lymphoid follicles along the submucosa, muscularis mucosa, and muscle layers and that the dilation may be due to either infiltrations of the muscular layers or to destruction of the nerve plexuses in the submucosa.

The pathology is of two types. The true lymphosarcoma is composed of small round cells with scanty cytoplasm and a moderately large nucleus resembling lymphocytes and lymphoblasts. The reticulum cell sarcoma is composed of larger cells of more stellate form with a pale cytoplasm and a larger, sometimes convoluted vesicular nucleus often containing a nucleolus. The disease appears more frequently in the small than the large bowel. In order of frequency in the intestinal tract is ileum, stomach, jejunum, cecum, and rectum. It begins in lymphoid follicles, spreads beneath the submucosa through muscularis mucosa, muscle layers, and to nodes in the mesentery. Perforation is infrequent. Two types of tumor are usually found, one being polypoid and the other an annular type. The polypoid is less common, is frequently multiple, and presents a fairly localized outgrowth of variable size projecting into the lumen of the bowel, commonly at the ileocecal area. The surface may show ulceration and fungation and may give rise to intussusception, intestinal hemorrhage, or volvulus. The more common annular form is usually singular and affects a variable length of

Read before the Association in annual session, Montgomery, April 17, 1958.

From Surgical Services, Southeast Alabama General Hospital and Flowers Hospital, Dothan, Alabama.

A second paper will follow in the February number under the title Spontaneous Rupture of the Small Bowel.

bowel. The bulk of the tumor lies in the submucosal layer. Later, infiltration and destruction of the mucosa occur, resulting in ulceration but the superficial mucosal cells may persist remarkably late in the disease, as may also the muscularis. As the muscle layers are destroyed by infiltration, the tumor reaches the subserosa and the thickened bowel may become adherent to other loops of neighboring viscera.

A third type of lymphosarcoma has been emphasized by Irvine et al. It is the ulcerative form. This has received little attention in medical literature. It consists of one or more ulcers involving the whole or a large part of the circumference of the bowel with no gross tissue mass. While occasionally undermined, the ulcer edges are usually slightly rolled and thickened owing to submucosal inflammatory edema rather than to neoplastic infiltration. A thin layer of tumor cells forms the ulcer floor and the progressive penetration of this layer deepens the ulcer and thins the bowel wall. In the more necrotizing forms of the neoplasm, the amount of surviving tumor tissue is remarkably slight and may be missed histologically in the accompanying inflammatory infiltrate. This is especially true should the nature of the lesion not be suspected. The subserosal layer is reached by direct extension and rapid ulceration of the growth, with destruction of the muscle layer, but occasionally there may be more massive growth and infiltration between the mucosa muscle and serosal coat through which necrosis and ulceration may lead to the formation of a tract from the lumen to the subserosa. The ulcerative necrotizing form of growth is prone to penetrate into the peritoneal cavity and the duration of symptoms is generally short.

The symptoms of the perforating type are generally of short duration but previous anorexia and weight loss are frequently noted. Recurring attacks of abdominal pain located in most any part of the abdomen, often colicky in nature, frequently following eating, and occasionally relieved by a semifluid diet, may be present. Boring abdominal pain, constant in character, is usually experienced just prior to perforation. With the onset of perforation, the symptoms and physical findings become those of an acute abdomen. These findings have been set out in another article to be published.

Irvine and Johnstone⁴ in 1954 could find only 30 cases of perforation but added 13 of their own. In their discussion, they point out that incidence of 47 per cent of perforations in this small series of lymphosarcoma of the small bowel is remarkable. Few such cases are reported in the literature, this complication generally being regarded as a rarity. This type of neoplasm should be kept in mind in all perforating lesions of the small intestine even

in the absence of obvious tumor. They state that the essential cause of these perforations is often not recognized, particularly when no tumor is palpable. Lymph node involvement may not be visible to the naked eye at first, although massive infiltration may rapidly develop later. The lesions are frequently attributed to a foreign body, inflammation, or abdominal injury. It is essential, therefore, that tissue be examined microscopically as otherwise tumor cannot be excluded. Even then the diagnosis is not always easy as the scanty tumor cells may be largely obscured by the secondary inflammatory reaction. There is no association of symptoms between the cell types of tumor found. The length of history did not differ materially in each cell variety but the reticulosarcomata were often ulcerative lesions appearing mainly in the proximal bowel and perforated three times more frequently than true lymphosarcoma. Ten of the thirteen perforating tumors were reticulosarcomata and three true sarcomata.

The prognosis in these cases is very poor. Early diagnosis and extensive resection may salvage a small percentage of these patients. Postoperative radiation is worthy of trial.

Case 1.—R. J., a 54-year-old colored male minister, was admitted to the hospital on November 23, 1954 with abdominal distention, nausea, vomiting, fever 105, and constipation. Significantly, three weeks prior to admission, while at work on a farm, he was struck in the abdomen with a board. Vomiting and abdominal pain followed. During the next three weeks he had remained in bed complaining of abdominal pain, fever, nausea, and vomiting. He had not lost any weight nor had he had any complaint prior to the time at which he was struck in the abdomen with the piece of lumber. Physical examination revealed an extremely ill, late middle age, colored male who had fever of 104 degrees F., pulse rate of 110, respiratory rate of 26, and with signs of moderate dehydration. No lymph nodes were palpable in the neck, axilla, groin, or other areas. The abdomen was greatly distended, extremely tender, and rebound tenderness was present throughout. No peristalsis could be heard. Rectal examination was negative.

Gastric suction was instituted, as was fluid therapy. This was continued for 24 hours, along with intravenous Aureomycin and intramuscular penicillin and dihydrostreptomycin. At the end of 24 hours his condition had improved, his fever had receded to 102 degrees, his abdomen remained distended, and no results had been obtained from enemata. No peristalsis could be heard on auscultation of the abdomen.

A tentative diagnosis of ruptured appendix was made, and after 24 hours of preoperative prepara-

tion, he was carried to the operating room for surgery.

When the abdomen was opened, the peritoneal cavity was found to contain a large amount of fluid, and a mass of matted small bowel was found in the midline and left lower abdomen. A perforation of the ileum was noted. This extended through an estimated two-thirds of the wall of the bowel, and there were multiple loops of small bowel attached in kinks to the area of perforation. Lymph nodes in the mesentery were enlarged and the colon was greatly distended but the distention was more pronounced in the transverse colon. No area of obstruction in the colon could be demonstrated. An estimated ten inches of small bowel, with a wedge-shaped piece of mesentery, were removed and end-to-end anastomosis was performed. The appendix was removed. Prior to closure, 500 milligrams of Aureomycin were placed in the abdominal cavity. The abdominal cavity was not drained. He was given two transfusions during the surgical procedure. It was noted that near the completion of the second pint of blood a chill occurred. The remaining portion of the blood was discontinued and sodium lactate was administered in a quantity of 1000 cc.

The pathologic report was as follows: The gross description reveals a segment of intestine whose length is estimated at 20 centimeters. Inasmuch as no haustrations are recognized, it is concluded that this is a segment of small intestine. Near the mesenteric side there is a hole which is three centimeters in diameter. On the opposite side, a slight distance from the mesentery, there is an additional opening which is two centimeters long and about four millimeters wide. The serosa in the vicinity of the smaller opening is covered with fibrin and is congested. Apparently, this area was adherent to some other structure. The rest of the wall is elastic, although congested. In the mesentery, there are multiple shotty lymph nodes. Incisions through the opening on one side show the mucosa to be thick around the edges of the perforation. The lining is fairly clean. The wall is elastic, although thicker than usual in this vicinity.

Microscopic examination of sections made through the slit-like ulceration of the intestine shows an ulcer whose base is of granulation tissue. In the granulation tissue there are many irregular ovoid or polygonal cells. These vary in size. Their nuclei are larger than usual and some of them show mitosis. The cytoplasm is neutrophilic and is not well outlined. Some mitosis is present. Much of this tissue is necrotic. The tissue infiltrates into the mesentery. The lymph nodes reveal similar cell structure. Other sections show infiltration of the wall of the bowel even involving the serosa and muscle layer.

The pathologist's comment was as follows: "The tissue is a malignant one. It is undoubtedly some sort of lymphoma which is fairly common in this part of the body. Perforation caused by it is also fairly common. The type of lymphoma is somewhat indefinite. This is the pathologic picture of a reticulum or stem-cell lymphoma." The diagnosis is malignant reticulum-cell sarcoma of the small bowel.

Case 2.—V. J., a 65-year-old, colored, widowed female, entered the hospital on May 12, 1955 complaining of abdominal pain, distention, nausea, vomiting, and diarrhea. The onset of her present illness was dated as four days before hospital admission. Her past history was non-contributory in that she had lost no weight and had been feeling perfectly well until the onset of her present illness. There had been no history of injury prior to the onset of her illness. Physical examination revealed an acutely ill, elderly, colored female with signs of mild dehydration, temperature of 102 degrees F., pulse rate of 90, respiratory rate of 24, and with an otherwise normal physical examination down to the abdomen. The abdomen was distended and tender, especially in the periumbilical area and left upper quadrant. Rebound tenderness was present in the upper half of the abdomen. Peristalsis could be heard but was considered decreased in amount. Rectal examination was negative. No intra-abdominal masses or palpable viscera were present. The general examination revealed no lymphadenopathy. The spleen could not be felt. No hernia was present. A tentative diagnosis of perforated duodenal ulcer was made, gastric suction was instituted, and fluid therapy was begun. Approximately six hours after admission to the hospital, she was carried to the operating room for surgery.

The abdomen was opened through an upper midline incision. On opening the abdomen, a small amount of fluid was obtained. This did not have the appearance of the fluid characteristic of a perforated duodenal or gastric lesion and the search was begun for the primary lesion. In a portion of small bowel, later identified as the jejunum, multiple diverticular-like outpouchings were noted. Multiple loops of small bowel were adherent to one another and a plastic exudate was present between the adherent loops. Many lymph nodes were noted in the mesentery and a perforation involving the mesentery and a portion of the circumference of the jejunum was noted. Based on previous experience, it was anticipated the type of disease present, and afferent and efferent loops of small bowel going into the matted together loops were identified, and a resection, with a wedge-shaped resection of the mesentery, was performed, followed by an end-to-end anastomosis.

The pathologic report was essentially the same as that detailed above for case one with the addition of a description of multiple areas of outpouchings in the segment of small bowel submitted for examination. The diagnosis was the same, namely, a reticulum cell sarcoma of the small bowel (jejunum).

Summary: Two cases of small bowel perforations secondary to lymphosarcoma are reported. Both were of the reticulum cell sarcoma type. One had multiple perforations with no previous suggestive history and no associated pathologic findings. The other had had blunt trauma to the abdomen of questionable significance. The immediate mortality rate was fifty per cent, the death being secondary to a transfusion reaction followed by anuria. Both died within six months of surgery.

1. Ackerman, L. V., and del Regato, J. A.: *Cancer: Diagnosis, Treatment and Prognosis*. St. Louis, C. V. Mosby Co., 1947, p. 75.
2. Deeb, Paul H., and Stilson, Walter L.: *Radiology* 63: 235, 1954.
3. Feldman, M.: *Clinical Roentgenology of the Digestive Tract*. Baltimore, William Wood and Company, 1938, p. 567.
4. Irvine, Wt., and Johnstone, J. M.: *Brit. J. Surg.* 42: 611, 1954.
5. Martin, J. S., and Friedell, H. L.: *Radiology* 59: 49, 1952.
6. Menne, F. R.; Mason, D. G., and Johnson, R.: *Arch. Surg.* 45: 1945.
7. Richman, S.; Goodman, H., and Russi, S.: *Gastroenterology* 28: 623, 1955.
8. Shanks, S. C., et al.: *A Textbook of X-Ray Diagnosis*. Philadelphia, W. B. Saunders Co., Vol. III, p. 305.
9. Sugarbaker, E. D., and Craver, L. S.: *J. A. M. A.* 115: 17, July 6, 1940.
10. Ullmann, A., and Abeshouse, B. S.: *Ann. Surg.* 95: 878, 1932.

MUSCULOSKELETAL MANIFESTATIONS OF VISCERAL MALIGNANCY

ROBERT S. HOGAN, M. D.

Birmingham, Alabama

The purpose of this paper is to discuss the musculoskeletal syndromes related to internal cancer and to emphasize the fact that joint manifestations, indistinguishable from those of rheumatoid arthritis, may arise as the first such indication of a visceral malignancy.

For many years it has been suspected that the coexistence of certain peripheral disorders and internal cancer is more than fortuitous.¹ Physicians are aware of the possibility, for example, that herpes zoster may signal the presence of an associated lymphoma or leukemia, especially in a patient over fifty. Likewise, such a patient presenting with a migrating thrombophlebitis should caution one to consider, at least, the possibility of an associated cancer, especially of the pancreas. Dermatologists point out that acanthosis nigricans and other skin lesions may represent the surface evidence of a cryptic neoplasm.² More recently,

peripheral neuropathy,³ myasthenia, and myotonia⁴ have each been described as a rare manifestation of bronchogenic carcinoma.

In recent decades two principal musculoskeletal syndromes, namely, dermatomyositis and generalized hypertrophic osteoarthropathy, have become recognized as possible signs of internal cancer. It has not been generally appreciated, however, that simple polyarthritis may have the same ominous significance. Such a case will be presented later.

DERMATOMYOSITIS

Dermatomyositis was first described in 1863 by Wagner and is a rare, ill-defined syndrome of unknown etiology which may be acute or chronic. It usually presents with a rash and symmetrical pain and weakness of skeletal muscles. Individual patients may also exhibit, in varying sequence, a wide assortment of symptoms and signs, including fever, weight loss, arthralgias, periorbital edema, dysphagia, digital ischemia, peripheral neuropathy, and metastatic calcinosis. An occasional case may show clinical or pathologic findings usually considered to be more typical of other "collagen diseases," namely, disseminated lupus

Read before the Association in annual session, Montgomery, April 17, 1958.

The author is Instructor, Department of Medicine, Medical College of Alabama. Formerly, Medical Resident and NIH Trainee in Rheumatic Diseases, University and Veterans Administration Hospitals, Birmingham.

1. Lipman, M. P., and Tober, J. N.: *Peripheral Manifestations of Visceral Carcinoma*, *Gastroenterology* 16: 188, 1950.

2. Bluefarb, Samuel M.: *Some Nonspecific Cutaneous Lesions Associated with Internal Cancer*, *Geriatrics* 2: 397, 1956.

3. Wyburn-Mason, R.: *Bronchial Carcinoma Presenting as Polyneuritis*, *Lancet* (London) 1: 203, 1948.

4. Heathfield, K. W. G., and Williams, J. R. B.: *Peripheral Neuropathy and Myopathy Associated with Bronchogenic Carcinoma*, *Brain* (J. Neurology) 77: 122, 1954.

erythematosus, periarteritis nodosa, systemic sclerosis (scleroderma), or rheumatoid arthritis. Parenthetically, there is evidence that the incidence of malignancies occurring in patients with these diseases is higher than in the general population.^{5,6,7}

Eosinophilia and leukocytosis are not uncommon laboratory findings in dermatomyositis and, as in other diseases with significant muscle wasting, there is often excessive urinary loss of creatine.

Significant gross pathologic findings are often lacking, and there is no pathognomonic microscopic lesion. The overall histopathologic picture, however, is usually sufficiently distinctive to confirm the diagnosis. The principal findings are related to the involved skeletal muscle, where the fibers show atrophy, fragmentation, hyaline degeneration, and proliferation of sarcolemmal nuclei. In the interstices there may be round cell infiltration, along with edema or fibrosis.

The coexistence of dermatomyositis and malignant disease was first recorded in 1935 by Bezecky.⁸ He reported two cases, one having carcinoma of the ovary and the other carcinoma of the breast. Since that date dermatomyositis has been reported to follow or, more frequently, precede the clinical appearance of a large variety of malignancies by periods of a few weeks or months. These associated lesions have included lymphomas, sarcomas, multiple myeloma, and carcinomas of the breast, ovary, colon, rectum, cervix, prostate, kidney, and the parotid gland.

The question has justifiably arisen: Is there evidence other than the proximity of onset that this coexistence is more than accidental?

In a critical review of 17 males and 28 females with dermatomyositis occurring at the University of Michigan Hospital, Curtis, Blaylock, and Harrell found that 8 (17.7%) had some form of malignancy and that 7 of these 8 were adult females.⁶ In a subsequent paper from the same institution Everett and Curtis revealed that a total of 60 cases of dermatomyositis had been accumulated and that none of the 19 children and adolescents therein had a coexisting malignancy.⁹ It is apparent from these and from other reports that the incidence

of coexistence in adults, especially in females, is far greater than would be expected in the population at large.

Further evidence of an interrelation is the fact that, in the majority of cases, distinct clinical improvement follows treatment of the malignancy. Paradoxically, such improvement often occurs even though treatment is not curative, and recurrent evidence of the new growth may not be accompanied by an exacerbation of the dermatomyositis. This amelioration of dermatomyositis by treatment of the associated malignancy suggested to Bezecky in his original report that the association was more than accidental. The apparently high incidence of coexistence along with the temporal proximity of onset of the two conditions has added much weight to this contention.

The mechanism of such an association remains far from clear, nevertheless. Individual theories will not be considered, but most have related to the possible toxicity or allergenicity of tumor products or of secondary infection. Suffice it to say that, whatever the underlying mechanism may be, the relationship appears genuine and certainly justifies a careful consideration of some underlying malignancy in cases of dermatomyositis, especially in adult females.

GENERALIZED HYPERTROPHIC OSTEOARTHROPATHY POLYARTHRITIS

Generalized hypertrophic osteoarthropathy is a syndrome consisting of clubbing of the digits, arthritis (or arthralgias) of multiple joints, and periostitis, especially of the long bones of the extremities. Clubbing itself was first mentioned by Hippocrates, but the complete picture of hypertrophic osteoarthropathy apparently went unrecognized until the late nineteenth century, when it was described individually by Bamberger and Marie and differentiated from acromegaly and other disorders.¹⁰

Clubbing of the fingers is a familiar phenomenon and may occur as an isolated familial trait of no clinical importance, but the acquired syndrome of generalized hypertrophic osteoarthropathy usually signifies the presence of some serious underlying disease. It has been seen in association with many disorders, including idiopathic ulcerative colitis, cirrhosis, congenital heart disease, subacute bacterial endocarditis, achalasia, aortic aneurysm, leukemia, and especially pulmonary disease (hence the familiar term, pulmonary hypertrophic osteoarthropathy).

A wide range of intrathoracic diseases is capable of initiating the syndrome. It is seen in 50 to 60% of cases of the relatively rare pleural meso-

5. Christianson, H. B.; Brunsting, L. A., and Perry, H. O.: Dermatomyositis, A. M. A. Arch. Dermat. and Syph. 74: 581, 1956.

6. Curtis, A. C.; Blaylock, H. C., and Harrell, E. R., Jr.: Malignant Lesions Associated with Dermatomyositis, J. A. M. A. 150: 844, 1952.

7. Lansbury, John: Collagen Disease Complicating Malignancy, Ann. Rheumat. Dis. 12: 301, 1953.

8. Cited by Reference No. 6.

9. Everett, M. A., and Curtis, A. C.: Dermatomyositis, A. M. A. Arch. Int. Med. 100: 70, 1957.

10. Cited by Lansbury, John: Connective Tissue Manifestations of Neoplastic Disease, Geriatrics 9: 319, 1954.

thelioma.¹¹ The preponderance of coexisting pulmonary diseases of a suppurative nature seen before the days of antibiotics has given way to the currently high incidence of associated pulmonary neoplasms. The incidence of arthropathy or osteoarthropathy in primary pulmonary neoplasms is unrelated to the histologic type but is higher with the more peripheral lesions.¹² Metastatic pulmonary tumors rarely produce the syndrome.¹³

Gynecomastia is common in generalized hypertrophic osteoarthropathy, and general enlargement of the feet and hands and thickening of the facial skin sometimes occur. The legs and forearms may be tender and take on a thickened, cylindrical appearance due to edema. The underlying periostitis can be identified on x-ray by thickening of the periosteum, often with a zone of subperiosteal radiolucency (Fig. 1).

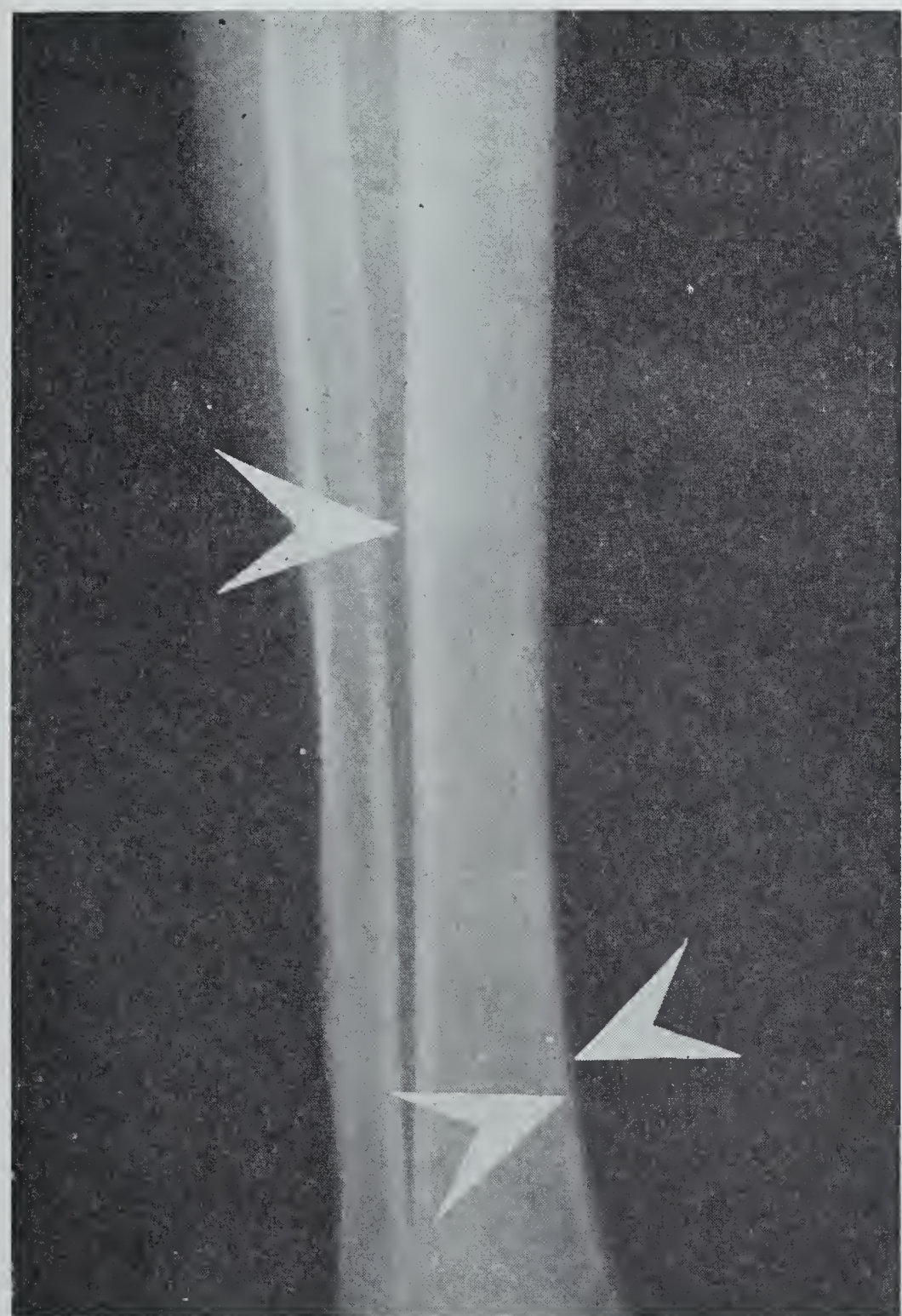


Fig. 1

A-P view of right leg showing thickened periosteum and faint subperiosteal zone of radiolucency.

11. Polley, H. F.; Clagett, O. T.; McDonald, J. R., and Schmidt, H. W.: Articular Reactions Associated with Localized Fibrous Mesothelioma of the Pleura, *Am. Rheumatism Assoc.: Proceedings of the Annual Meeting*, 1952.

The syndrome seen in association with suppurative or chronic lung disease is usually insidious in development and may be almost asymptomatic. That associated with neoplasia, on the other hand, is often acute and marked by rather prominent constitutional symptoms.^{14,15,16} In the latter cases, moreover, polyarthritides is often a prevalent feature,^{11,13,14,15,17} though an occasional author seems unmindful of this.¹⁸

Most general textbooks and many monographs on hypertrophic osteoarthropathy and on cancer fail to point out that such joint symptoms may appreciably precede or, rarely, occur completely without clubbing or periostitis. Hammarsten and O'Leary¹⁵ and Vogl et al.¹³ have recently emphasized this.

The incidence of joint involvement in various reported series of bronchogenic carcinoma has varied from 10 to about 50%, and it appears to represent the initial manifestation of the disease in at least 5%. Many weeks or months may pass before chest symptoms finally appear.^{19,20} A few years after Graham first accomplished a successful pneumonectomy for carcinoma, Craig²¹ and Van Hazel²² pointed out the importance of recognizing pulmonary arthropathy while the lesion is operable.

As in dermatomyositis, surgical resection frequently provides striking relief from active osteoarthropathy. Such relief has been noted within

12. Ray, E. S., and Fisher, H. P., Jr.: Hypertrophic Osteoarthropathy in Pulmonary Malignancies, *Ann. Int. Med.* 38: 239, 1953.

13. Vogl, A.; Blumfeld, S., and Gutner, L. B.: Diagnostic Significance of Hypertrophic Pulmonary Osteoarthropathy, *Am. J. Med.* 18: 51, 1955.

14. Schulman, L. E.: Hypertrophic Osteoarthropathy, *Bull. Rheumat. Dis.* 7: 135, 1957.

15. Hammarsten, J. F., and O'Leary, J.: The Features and Significance of Hypertrophic Osteoarthropathy, *A. M. A. Arch. Int. Med.* 99: 431, 1957.

16. Hansen, J. L.: Bronchial Carcinoma Presenting as Arthralgia, *Act. Med. Scandinav. Supp.* 266: 467, 1952.

17. Gall, E. A.; Bennett, G. A., and Bauer, W.: Generalized Hypertrophic Osteoarthropathy. A Pathologic Study of Seven Cases, *Am. J. Path.* 27: 349, 1951.

18. Brugsch, H. G.: *Rheumatic Diseases, Rheumatism, and Arthritis*, J. B. Lippincott Co., 1957.

19. Holmes, H. H.; Bauman, E., and Ragan, C.: Symptomatic Arthritis Due to Hypertrophic Pulmonary Osteoarthropathy in Pulmonary Neoplastic Disease. A Report of Seven Cases, *Ann. Rheumat. Dis.* 9: 169, 1950.

20. Berg, Ralph, Jr.: Arthralgia as a First Symptom of Pulmonary Lesions, *Dis. of Chest* 16: 483, 1949.

21. Craig, J. W.: Hypertrophic Pulmonary Osteoarthropathy as the First Symptom of Pulmonary Neoplasm, *Brit. M. J.* 1: 750, 1937.

22. Van Hazel, W.: Joint Manifestations Associated with Intrathoracic Tumors, *J. Thoracic Surg.* 9: 495, 1940.

hours following surgery,^{13,15} though the latter be only palliative. The steroids also prove to be of considerable symptomatic benefit in some cases.

PATHOLOGY

In 1951 Gath, Bennett and Bauer¹⁷ reported the pathologic findings from 7 cases of generalized hypertrophic osteoarthropathy. In the clubbed digit they found swelling of collagen bundles and widening of the interfascicular spaces. The synovial involvement varies from very slight edema and round cell infiltration to marked fibrous thickening, pannus formation, and joint ankylosis indistinguishable from that seen in rheumatoid arthritis.^{11,14} There is proliferation and round cell infiltration of the periosteum and subperiosteum of long bones and occasionally of others.¹²

MECHANISM

Many theories have been advanced in an effort to explain generalized hypertrophic osteoarthropathy. Mendlowitz and Leslie²³ induced a similar syndrome in one of four dogs by surgically producing a cyanotic heart disease. Many patients, however, have no detectable anoxemia.

In addition to the various types of anoxia, theories have suggested endocrine disturbances, toxicity or allergenicity of tumor products or of secondary infection, and, more recently, some sort of "neurovascular reflex." None would seem as yet to account for all the phenomena observed.

CASE REPORT

A 35-year-old colored male laborer was admitted to the Birmingham Veterans Administration Hospital on June 18, 1955 because of joint pain. He had been in good health until four weeks prior to admission, when he developed pain in the shoulders. Within a few days the patient developed frank arthritis of the knees, ankles, elbows, wrists, and the proximal interphalangeal joints of the hands (especially of the index and middle fingers). About two weeks before admission he developed fever, a mild sore throat, and moderate exertional dyspnea. During the four weeks before admission the patient lost from 165 to 140 pounds, and his arthritis became progressively worse.

There had never been joint symptoms prior to the present illness, and the patient denied any recent infection. He had been a light smoker (5 to 10 cigarettes a day) for many years. The remainder of the history was non-contributory.

The physical examination on admission revealed a thin, acutely ill, colored male with a temperature of 101.6. His tongue was smooth and red and the mucous membranes pale. A soft systolic murmur

was heard over the cardiac apex, and the pulmonic second sound was slightly louder than the aortic. A distant inspiratory wheeze was heard over the left chest anteriorly, but this cleared with coughing; the lungs were otherwise normal. The abdomen was normal. A small left epitrochlear node was palpable, but no rheumatoid nodules were present.

Examination of the bones and joints showed pain on manipulation of the shoulders, and swelling, tenderness and pain on motion of the elbows, knees, ankles, left wrist, and the proximal interphalangeal joints of the hands. Extension of the elbows was limited by pain to about 135 degrees. The middle fingers were described as fusiform (Fig. 2).



Fig. 2

Note the fusiform enlargement of the middle fingers—so often described in rheumatoid arthritis.

The admission hemogram showed a white count of 12,500 (82% polys, 17% lymphs, and 1% monocytes), a red count of 2,700,000, hemoglobin of 7.5 Gm., and a hematocrit of 24 (a normocytic, normochromic anemia). The urine had two-plus albumin, but was otherwise normal.

Admission chest x-ray and cardiogram were interpreted as normal. There was 60% sickling of red cells in 24 hours, and the serologic test for syphilis (VDRL) was negative. The corrected sedimentation rate was 17 (Wintrobe). Throughout the remainder of the illness the sedimentation rate varied from 20 to 34, and stool guaiac tests and blood cultures were repeatedly negative.

Following admission the patient continued to complain of a sore throat, but cultures revealed a normal flora, and there was no apparent response to penicillin or to multiple vitamins. The patient became bedridden because of the arthritic pains, and he could not tolerate physiotherapy.

23. Mendlowitz, N., and Leslie, A.: Experimental Simulation in the Dog of Cyanosis and Hypertrophic Osteoarthropathy, *Am. Heart J.* 24: 141, 1942.

The following studies were done and demonstrated no significant abnormality: thymol turbidity, cephalin flocculation, urine urobilinogen, direct and indirect serum bilirubin, reticulocyte count, multiple L. E. cell preparations, heterophile antibody, serum uric acid, blood sugars, complete x-ray survey of the bones, biopsy of the epitrochlear node (including cultures on various media as well as microsection), and synovial fluid and bone marrow smears and cultures on various media. The serum albumin was 3.2 and the globulin 4.0.

On the tenth hospital day (June 28) the patient was begun on intravenous corticotropin and for a period showed moderate improvement, but he remained febrile (100 to 102°). In early July a PSP and BSP were normal, and gold therapy was instituted.

Over the next four weeks his general condition deteriorated, though intra-articular hydrocortisone on occasions produced transient local improvement. During this period skin tests with Frei antigen, coccidioidin, blastomycin, and histoplasmin were negative. A second-strength PPD was positive. Agglutinations for typhoid, paratyphoid, Brucella, and Proteus OX₁₉ were negative. The BUN was normal, and the urine was negative for Bence-Jones protein.

He developed a cough in early August, and a chest x-ray revealed a suspicious density near the pulmonary conus. Studies at that time included multiple sputum Papanicolaou preparations, bronchoscopy with study of bronchial washings, and a scalene node biopsy. These failed to reveal evidence of malignancy.

His general condition continued to worsen. He was started on prednisolone orally a few days later, and gold was discontinued. By the latter part of September the patient was afebrile and had improved sufficiently to go home on this therapy.

On return three weeks later, however, he had developed pronounced hoarseness, and studies revealed paralysis of the left vocal cord. Sputum Papanicolaou's and bronchial washings were again negative, but on x-ray the left hilar density was more distinct, and bronchoscopy revealed medial displacement of the left main stem bronchus.

After suitable preparations a thoracotomy was performed and a non-resectable tumor was found to be infiltrating the structures of the left hilum. Biopsy revealed a pleomorphic cell carcinoma.

Following surgery his joint symptoms became minimal and early clubbing of the fingers detectable. However, his general condition deteriorated rapidly despite x-ray therapy, and he expired two months later. Autopsy revealed metastatic involvement of the brain and kidneys.

Polyarthritides, like clubbing, has been recognized since antiquity. The term "rheumatoid arthritis" was first applied in 1859 by Garrod, and has come to signify a systemic illness with a generally symmetrical polyarthropathy. It gives evidence of acute or chronic inflammation and proliferation of the synovium and may proceed to pannus formation and to fibrous or bony ankylosis. There is still no conclusive evidence that it represents a specific nosologic entity or that the presence of rheumatoid nodules, psoriasis, a juvenile onset, spondylitis, splenomegaly and lymphadenopathy, or a positive reaction to one of the newer serologic tests, should so qualify it. Nevertheless, the syndrome is a common one in adults of all ages and usually proves to be unassociated with any underlying "causative" disorder, theories to the contrary notwithstanding.

Although many of the protean manifestations of acute rheumatoid arthritis have not been described as yet in the secondary polyarthritides of malignant disease, there seems to be no consistent difference between the two. However, chronic polyarthritides and other prevalent rheumatic disorders, such as bursitis and "muscular rheumatism," are easily distinguished from frank polyarthritides arising *de novo*. It is when confronted with the latter that one's clinical judgment must dictate the extent to which investigation for an associated malignancy is indicated.

SUMMARY

Dermatomyositis and generalized hypertrophic osteoarthropathy are discussed as potential manifestations of visceral cancer. It is stressed that polyarthritides, occurring alone or simply as the initial stage of osteoarthropathy, can have the same ominous significance. A representative case is described.

The author would like to express his appreciation to Dr. Gene W. Gray for his assistance in the preparation of the case report.

What is the outcome of paralytic polio? The incidence of respiratory paralysis is 15 per cent, according to the publication "Patterns of Disease" prepared by Parke, Davis & Company for the medical profession. However, one study of 64,146 patients showed that two years after illness 73 per cent of polio patients who required respirator equipment during the acute stage of illness no longer needed such aid. Respirator equipment was still necessary for 13 per cent, but 41 per cent of this group needed it only at night.

The dreaded crippling aftermath of the disease occurs less commonly than is believed. Three out of 4 paralytic polio victims are able to walk again, "Patterns" says. In the study cited above only 1.5 per cent of patients were totally paralyzed at the time of discharge, and only 2.5 per cent had quadriplegia. One out of 10 patients had "no evident disability."

THE USE OF LATEX AGGLUTINATION REACTION IN THE DIAGNOSIS OF RHEUMATOID ARTHRITIS

ALEXANDER ULLOA, M. D.,
STANLEY W. GRIFFIN, B. S.,
MERRY LYNN HAYES, B. S.,

and

HOWARD L. HOLLEY, M. D.
Birmingham, Alabama

It has been only during the past decade that an effort has been directed toward a better understanding of the fundamental nature of connective tissue and its manifestations in inflammation and repair. Recently, rheumatoid arthritis, the most common disease affecting these tissues, has received an increasing amount of attention in an attempt to elucidate its pathogenesis. Although it is a disease of antiquity, very little is known of its basic pathophysiology.

One of the difficulties encountered in the study of rheumatoid arthritis is the difficulty in diagnosis, especially in those patients with early, mild, or atypical forms of the disease. Even with the more refined criteria for diagnosis that have been suggested recently, the problem is still in evidence; there is an obvious need for a more definitive test in which the diagnosis could be readily ruled in or out. It is only with such criteria that a more scientific approach can be made to the study of this disease.

It has long been recognized that serum from patients suffering with rheumatoid arthritis possesses the capacity to agglutinate sensitized particulate bodies such as bacteria, erythrocytes, colloidion and latex particles. This agglutination capacity is predicated upon the presence in serum from rheumatoid patients of a factor or factors that are either absent or present in minimal amounts in the serum of normal individuals. Such a factor has been identified in the gamma globulin component of rheumatoid sera, using the analytical ultracentrifuge, paper chromatography and ion exchange chromatography, in addition, of course, to the variety of the serologic indicator systems. The exact nature of this so-called "rheumatoid factor" still remains obscure but the fact that it appears consistently in rheumatoid serum and rarely ever in serum of non-rheumatoid patients represents one of the most significant advances in the study of this bizarre disease.

Since Rose et al.¹ described the first serologic

From the Section on Rheumatic Diseases, Department of Medicine, Medical College of Alabama, Birmingham, Alabama. Supported by the John R. Irby Fund for the Study of Arthritis, and the National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda, Md.

1. Rose, H. M.; Ragan, C.; Pearce, E., and Lipman, M. O.: Differential Agglutination of Normal and Sensitized Sheep Erythrocytes by Sera of Patients with Rheumatoid Arthritis, *Proc. Soc. Exper. Biol. and Med.* 68: 1-6, 1948.

test for rheumatoid arthritis using sensitized sheep cells in 1948, there have now been introduced more than a dozen modifications. All are designed to demonstrate the presence or absence of the rheumatoid factor in the serum to be tested. The various modifications have been designed to increase the sensitivity and specificity of the test.

There are now the (a) modified sheep cell agglutination test; (b) animal potentiated agglutination; (c) agglutination test on the globulin fraction; (d) fraction II or gamma globulin test; (e) latex particle test; (f) test for agglutination inhibitor; and (g) rapid flocculation test with sensitized bentonite particles. The sensitized sheep cell agglutination has been the test most widely used as a diagnostic criterion in rheumatoid arthritis.

It should not be overlooked that these serologic reactions may be directly related to the basic pathologic process and, if so, the study of their mechanism may represent a direct approach to the problem of etiology of this disease. Thus far, and in spite of a considerable amount of investigation during recent years, undeniable confusion still exists concerning the mechanism and the actual meaning of these reactions. However, Svartz² has recently reported the isolation of the "rheumatoid factor" which is a macroglobulin with an ultracentrifuged sedimentation constant of 18.7 *S*. The factor can now be more intensively studied and characterized. Certainly this important finding should do much in unraveling the riddle of the source and significance of the "rheumatoid factor" and its significance in rheumatoid arthritis.

Considerable work has been reported on the use of the different variations of the serologic reaction, especially as to their usefulness as a routine laboratory diagnostic procedure. This paper represents a report of our experiences at University Hospital and Hillman Clinic with the latex test using whole serum.

Clinical Materials and Methods: All the patients studied gave a history of complaints referable to the musculoskeletal system. Their ages ranged from 6 to 68 years. The unknown blood serum was obtained by the usual method. Refrigeration or freezing of the serum apparently does not affect

2. Svartz, N.; Carlson, L. A.; Schlossmann, K., and Ehrenberg, A.: Isolation of the Rheumatoid Factor (Preliminary Report), *Acta Med. Scandinav.* Vol. CLX, FASC II, 87, 1958.

the reaction; therefore, storage for periods of time appears practicable and adds to the feasibility of using this test as a routine procedure in a clinical laboratory. The serum is tested for its ability to agglutinate latex particles of uniform size. The details of the latex test are well described elsewhere and therefore are not repeated here.³

The patients studied were arbitrarily divided into 7 different diagnostic categories according to the usual clinical criteria. Group 1 consisted of 85 patients, 48 males and 37 females, who fulfilled the proposed criteria of Ropes et al. for the diagnosis of definite rheumatoid arthritis. In Group 2, there were nine patients, five males and four females, who were diagnosed as having musculoskeletal disease presenting diagnostic problems but nonetheless fell well within the criteria of probable rheumatoid arthritis. In Group 3, there were 23 patients, 15 males and eight females, with a known diagnosis of rheumatic disease other than rheumatoid arthritis, namely, osteoarthritis. In Group 4, there were nine patients, four males and five females, with the diagnosis of systemic lupus erythematosus. Group 5 consisted of 10 patients, all males, who had the diagnosis of rheumatoid spondylitis of the ankylosing type. In Group 6, there were 25 patients, 22 males and three females, with a variety of connective tissue diseases, i.e., systemic scleroderma, Reiter's syndrome, dermatomyositis, juvenile rheumatoid arthritis, rheumatic fever, fibrositis, and palindromic rheumatism. Group 7 consisted of 5 patients, all males, with clinical gout. Group 8 consisted of five normal individuals, most of them medical students and the rest technical personnel from the laboratory who served as controls for this study.

The results obtained are summarized in Table I.

TABLE I
RESULTS OF LATEX FIXATION TEST USING
WHOLE BLOOD SERUM

Diagnostic Category	No. Tested	No. Positive	% Positive
Group I Definite Rheumatoid Arthritis.....	85	75	88
Group II Probable Rheumatoid Arthritis.....	9	0	0
Group III Osteoarthritis.....	23	0	0
Group IV Disseminated Lupus Erythematosus.....	9	3	33.3
Group V Ankylosing Spondylitis.....	10	0	0
Group VI Diseases Other Than Rheumatoid Arthritis	25	0	0
Group VII Gouty Arthritis....	5	0	0
Group VIII Normal Controls	5	0	0

3. Singer, J. H., and Plotz, C. M.: Latex Fixation Test. I. Application to Serologic Diagnosis of Rheumatoid Arthritis, *Am. J. Med.* 21: 888-892, 1956.

Results: The ideal test, of course, is one that would give positive tests in all known patients with rheumatoid arthritis and a negative test in those known not to have the disease. Our overall total of positive reactions in known rheumatoid arthritic patients was 88%. Plotz and Singer⁴ obtained only 71.3% positive results in such cases, while Olsen and Rantz⁵ found only 56% of all cases of definite rheumatoid arthritis. Hall et al.,⁶ studying 177 patients with the clinical diagnosis of rheumatoid arthritis, found positive results in 72.3% with the latex whole serum test. In the present study, 10 patients with an unequivocal diagnosis of rheumatoid arthritis had a repeatedly negative test. It is possible that with a more refined technique, such as that using the euglobulin fraction of the serum, some of these also would have positive tests. The overall results in our series would appear to indicate that this test is feasible as a routine laboratory diagnostic procedure. Certainly the test is not difficult to perform and the cost is negligible. Likewise, another advantage of this test is that there are no "doubtful" results; the test is either positive or negative.

Discussion: It is of interest that two patients who had positive reactions in the acute phase of the disease became negative during a clinical remission after therapy with gold salts. Apparently this phenomenon has been observed elsewhere.⁷

In contradistinction to the reports by Hall et al.,⁶ Ziff,⁸ and others,⁷ the negative results obtained in our series in rheumatoid spondylitis are of interest. Hall and his associates found over one-half of their patients with rheumatoid spondylitis gave positive reactions. It should be pointed out though that they were using the much more sensitive inhibition procedure that has been described by Ziff.⁹ In their series of patients there was no apparent correlation between the number of positive

4. Plotz, C. M., and Singer, J. M.: The Latex Fixation Test. II. Results in Rheumatoid Arthritis, *Am. J. Med.* 21: 893, 1956.

5. Olsen, C. R., and Rantz, L. A.: The Latex Fixation Test Using Whole Serum and Euglobulin Fraction in Various Arthritic Disorders, Arthritis and Rheumatism 1: 54-61, 1958.

6. Hall, A. P.; Mednis, A. D., and Bayles, T. B.: The Latex Agglutination and Inhibition Reactions. Clinical Experience in the Diagnosis of Rheumatoid Arthritis, *New England J. Med.* 15: 731-35, 1958.

7. deForest, G. K.; Mucci, M. B., and Boisvert, P. L.: Clinical Behavior of Hemagglutination Test for Rheumatoid Arthritis, *Am. J. Med.* 21: 897-900, 1956.

8. Ziff, M.: Agglutination Reaction in Rheumatoid Arthritis, *J. Chron. Dis.* 5: 644-667, 1957.

9. Ziff, M.; Brown, P.; Badin, J., and McEwen, C.: Hemagglutination Test for Rheumatoid Arthritis with Enhanced Sensitivity Using Euglobulin Fraction, *Bull. Rheumat. Dis.* 5: 75, 1954.

tests and the presence of peripheral joint involvement in the group.

We have had no convincing false-positive results in our series using whole serum. The only positive results obtained in diseases other than rheumatoid arthritis were in systemic lupus erythematosus; our results would seem to concur with those of Ziff et al.,¹⁰ Plotz and Singer,⁴ and others.^{11,12}

SUMMARY AND CONCLUSIONS

A report on the use of the latex agglutination reaction using whole serum in the diagnosis of rheumatoid arthritis has been presented. The test was used in a series of eighty-five patients with clinical evidence of rheumatoid arthritis, with an overall positive result obtained in 88 per cent. On the basis of this study we feel that this will offer much in the diagnosis of rheumatoid arthritis.

Unusual Fingernail Condition Reported—Wearing rubber gloves and using a detergent while scrubbing pans may damage the fingernails.

Three cases of hemorrhage under the nails of men who washed pans in a hospital kitchen were reported by Dr. Peter I. Long, Jr., Dayton, Ohio.

Writing in the November 1 Journal of the American Medical Association, he said the primary causes of the condition appeared to be injury from scrubbing and a change in the acidity of detergent solution trapped in the gloves.

Prompt recognition of the lesions and elimination of the offending agent is necessary, he said, to prevent extensive nail bed damage.

Further study is needed to determine the exact cause of the condition, since its occurrence could have medical and legal significance if the cosmetic and functional impairment were severe.

In arriving at the cause of the condition, Dr. Long said in his preliminary report that several factors stood out. They are:

—Pan scrubbing entails a lot of hard scouring which would have a tendency to separate the nail from the nail bed, injuring the tissue.

—Only men who wore rubber gloves developed the condition, although they showed no sensitivity to rubber.

—The washing solution that became trapped in the gloves was more acid than that in the sink, possibly because perspiration became mixed with it.

Only men who had worked as pan washers for a short time developed the hemorrhages. The fact that they were not accustomed to the work may be an important factor, Dr. Long said. He does not believe that the hemorrhages resulted simply from injury to the tissue. If injury were the only cause, there would be more cases.

10. Ziff, M.; Brown, P.; Lospallato, J.; Badin, J., and McEwen, C.: Agglutination and Inhibition by Serum Globulin in the Sensitized Sheep Cell Agglutination Reactions in Rheumatoid Arthritis, *Am. J. Med.* 20: 500, 1956.

11. Ball, J.: Sheep Cell Agglutination Test for Rheumatoid Arthritis. A Clinicopathological Study, *Ann. Rheumat. Dis.* 11: 97, 1952.

12. Ball, J.: The Serum Factor in Rheumatoid Arthritis Agglutinating Sensitized Sheep Red Cells, *Lancet* 2: 520, 1950.

Government Health Insurance Losing Favor in England—Contrary to expectations, voluntary health insurance in England has not been eliminated by the government health insurance program.

In fact, the people of Great Britain are now purchasing voluntary health insurance at an increasing rate.

An examination of the 10-year British program has led a New York researcher to conclude that a government approach to health insurance is neither necessary nor desirable.

This is reported by J. F. Follman, Jr., director, information and research, Health Insurance Association of America, in an article that appeared in the November 22 Journal of the American Medical Association.

In his report, the author said, "it would seem a truism that voluntary health insurance protection in the United States today is on much firmer ground than was the case in Great Britain prior to the formation of NHS."

NHS is the National Health Service which went into effect in 1948. Before government intervention, voluntary programs limited their coverage to loss of income due to accidents or illness. Little coverage was written in the way of hospital or medical cost insurance.

The purpose of NHS was to provide comprehensive medical care and services to all the people with the costs to be borne by funds derived from taxation (payroll deductions and general tax funds). The author said these services included hospital care, medical care given by a physician, dental care, ophthalmic care, and drugs and appliances.

Certain forms of care, such as that in nursing or convalescent homes, are not provided under the NHS program and if private hospital accommodations are chosen, no benefits at all can be derived with regard to hospital care.

In addition, the author said, certain charges are made for some forms of care and specific medications or appliances.

It was felt, however, that because of the vast coverage offered by NHS, in time the voluntary programs would come to an end, the author said.

The converse now appears to be true, he pointed out.

In one program alone—British United Provident Association—there has been an increase from 34,000 contributors in 1949 to over 300,000 today. To this must be added the dependents of the contributors which would bring the total coverage to 600,000.

Researcher Follman said, "Since the BUPA is the most prominent writer of coverage in Britain, this growth rate is significant."

The principal coverage offered by this and similar plans is against the cost of maintenance in hospital private wards and nursing homes, cost of surgeons' fees, anesthetic services, consultants, specialists, home nursing care, therapy, and diagnostic services.

The benefits are directed at the costs of the more serious illnesses rather than at those of minor ailments, the author said.

He also cited the major reasons for the decline in interest in the government program and the sharp rise in contributions to the voluntary programs. Among these are:

—Continued increase of the cost of certain services provided under the government program. This is particularly true in the area of dental care, drugs, and optical appliances.

—Desire for private rooms which are not available under NHS.

—Limited number of government hospital beds. The author reports that at the end of 1956, it was estimated that 431,000 persons were on the NHS waiting list for hospital beds.

Trace Parental Brutality as Cause of Some Murders—

The nation's family physicians have been told that remorseless, physical brutality of parents can be the underlying factor in causing some men—the lone-wolf type—to commit first-degree murder.

Writing in the November 29 Journal of the American Medical Association, a team of five researchers said a more intimate knowledge of family patterns by physicians is needed to prevent possible tragedies.

Wider knowledge of family patterns, with subsequent intervention by physicians, especially pediatricians, might well be lifesaving, the authors said.

The team of researchers, working with Dr. Adelaide M. Johnson, a psychiatrist of the University of Minnesota, Minneapolis, was made up of Drs. Glen M. Duncan, Shervert H. Frazier, and Edward M. Litin, of the Mayo Clinic and Foundation, Rochester, Minn., and Alfred J. Barron, M. A., of the University of Minnesota.

With the cooperation of Warden Douglas C. Rigg of the Minnesota State Prison and his staff, the team selected six individual, isolated murders for interview and study.

The prisoners were selected according to certain criteria: they were to be normally intelligent white men, convicted of first-degree (premeditated) murder, who did not deny the crime, and who were of middle-class background from families of good social standing. They were to have no history of addiction to drugs or alcohol, organic disease of the brain, or epilepsy. There was to be no known history of mental disease prior to the murder, and one of the most important factors was that both parents had to be available for private interview.

"In interviews with the six prisoners, the first striking impression was the readiness with which they discussed the crime and the events leading up to it," the Journal article said, adding: "They also invited return interviews, although they knew that no legal advantage would accrue to them as a result of additional consultations. They did not try to escape responsibility for the crime or to lay the blame on others. Almost without exception, when the stories of prisoner and family were at variance the prisoner was found to be telling the truth."

The authors said:

"These studies led to the conclusion that, among these prisoners, remorseless, physical brutality at the hands of the parents had been a constant experience. Brutality far beyond the ordinary excuses of discipline had been perpetrated on them. In no case was any effort made by the prisoner to conceal the crime or to evade capture.

"The most striking aspect of the interviews with the parents was the remarkable aptitude of these persons for evasive shifting of blame. Nor was there any suggestion from them of self-criticism or guilt over their sons' up-bringing or downfall."

Reports of two of the six cases were cited.

One prisoner, a 30-year-old man, killed his former sweetheart with an ax in the presence of neighbors. He had been the target for violent uncontrolled brutality on the part of the father, who, although he had a good job as a shop foreman, was a philandering alcoholic and a physical and mental sadist in his relationships with the prisoner's mother. The father's wild beatings of the boy were so frightening that neighbor men often interceded. The father often beat and choked the mother in the children's presence.

Commenting on this case, the researchers said:

"It was only by a stroke of luck that this prisoner actually was not killed by his father. . . . This boy, by direct example, learned that frustration and anger were handled by violence. He learned that men are brutal to women. The tremendous unconscious hatred for his

mother, who submitted to the father and then turned to the prisoner for love, finally overwhelmed him at the expense of his alternately promiscuous and seductive fiancée."

In the second case, the 27-year-old prisoner strangled his sweetheart when she refused to marry him. He was exceedingly bitter toward his own mother. He said she was vicious; she would choke him and beat him so hard with a barrel stave that he became bruised and bleeding. She used to say to him: "What did I ever do that God thinks I deserved to have you wished on me!"

The author's conclusion in this case was:

"In the later life of this prisoner it seems that the mother of his sweetheart was the nominal target for his hostility, but when the girl herself spurned him he had no compunction about turning his vengeance on her. His lack of sense of guilt or restraint was modeled after those defects in his mother."

In four of the six cases the most striking common feature was the continuous, remorseless brutality which the prisoners suffered at the hands of one parent. In the other two cases, it developed that the prisoners were psychotic at the time of the murders. In these two cases there was no history of gross brutality.

Referring generally to the brutality in the four cases, the researchers said there was one incident in which the father held his nude little boy by the heels, belted him, then dropped him on his head to the floor. Recurrently, the researchers said, some prisoners, when children, had been flung bodily across a room.

The authors said that while violence constituted the most common factor in all four cases, it should not be concluded that brutality is the major factor in the cause of murder. They urged that additional "extensive and intensive" work be done with similar subjects. The same team is already working with teen-age first-degree murderers to build up more evidence.

Meanwhile, the authors concluded:

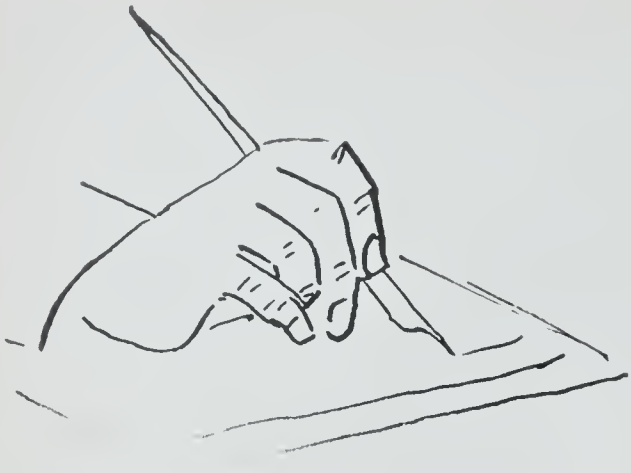
"It seems that such factors of brutality must come under the scrutiny of pediatricians and family physicians. Direct inquiry into the mode of punishment and discipline should be made by physicians whose practice includes the care of children. It is felt that intervention by them in known sadistic family patterns may well avert a later violent crime."

Does the incidence and course of polio differ with the sexes? The disease appears to afflict males more often than females, particularly in the under 20 and 35 and over age groups, according to the publication "Patterns of Disease" prepared by Parke, Davis & Company for the medical profession.

However, the risk of polio is greater for women during the childbearing years. In pregnant women, it strikes most frequently in the second trimester, where more than half the cases occur. But it is more severe when it occurs in the third trimester, with about three-quarters of its victims contracting the paralytic form.

There is evidence that polio tends to occur in the first trimester in women carrying a male fetus and in the third trimester if the fetus is female, "Patterns" reports. Infants of mothers who have had polio early in pregnancy are not as well developed as other babies and weigh less at birth.

The disease is usually less severe among women, "Patterns" says, although among children up to 15 years of age, quadriplegia occurs more frequently in girls than in boys. In young adults (persons 16 to 39 years of age), men account for about 54 per cent of quadriplegia cases, while cases in which paralysis develops in only one leg occur mostly among women (72.7 per cent).



Editorials

FUNCTIONS OF AMINES AS BRAIN HORMONES

Basic research at the National Heart Institute on the functions of amines as brain hormones and on the enzymes that make and destroy these chemicals in the human body is leading to the development of drugs which may be useful against hypertension, epilepsy, and mental illness.

The amines of greatest current interest are serotonin and norepinephrine. These are found in the brain and other body tissues, where they may influence blood pressure, emotions, and other functions that are beyond conscious control.

The drugs under study are compounds which counteract monoamine oxidase (MAO), an enzyme which normally destroys these amines in the body. Many of the effects of these MAO-inhibiting drugs are thought to be due to the accumulation of serotonin and norepinephrine in tissues. Other amines still undiscovered may also be involved.

Because the amines destroyed by MAO have a role in controlling blood pressure, NHI scientists have been exploring the blood pressure effects of the MAO inhibitors. One usually powerful inhibitor, 1-phenyl-2-hydrazinopropane, or JB 516, has been found by Drs. Louis Gillespie, Luther Terry, and Albert Sjoerdsma to lower blood pressure in hypertensive patients.¹ The antihypertensive effects of JB 516 appear from these clinical studies to resemble those of certain drugs in wide use against hypertension but to lack their undesirable side effects of blurred vision, constipation, dry mouth, and sexual impotence.

It is too early to determine whether JB 516 itself will be of value against hypertension. Only long usage will show whether it may have its own side effects. But the findings indicate to the Institute scientists that MAO inhibition may represent a promising new approach to the treatment of hypertension.

MAO inhibitors have also been found by Drs.

1. Drs. Louis A. Gillespie, Luther L. Terry, and Albert Sjoerdsma presented the findings concerning JB 516 in hypertensive patients at the annual scientific sessions of the American Heart Association, October 26, 1958 in San Francisco.

Darwin Prockop and Parkhurst Shore, working under the direction of Dr. Bernard Brodie, to block the convulsions that result from electric shock and the stimulant drug metrazol in animals. Because the convulsive response to these agents has been a reliable test for screening anti-epileptic drugs in the past, these findings give hope that MAO inhibitors may be useful against the convulsions of epilepsy. All of three MAO inhibitors studied blocked the electroshock and metrazol seizures in animals but JB 516 was again the most effective. With all three the anticonvulsant effect was shown to be mediated by a rise in the brain amines.²

The workers had anticipated the anticonvulsant effects of these amine-protecting drugs because previous studies had shown that the Rauwolfia tranquilizers, which aggravate electroshock convulsions, deplete the brain of its amines.

The use of Rauwolfia tranquilizers as research tools at NHI in the past four years has disclosed much of what is known about the roles of norepinephrine and serotonin in brain functions and has explained the actions of many drugs by their interaction with these hormones.

In 1955, when the Rauwolfia tranquilizers were beginning to be used widely against hypertension and excited mental states, Drs. Brodie and Shore discovered that these drugs had the remarkable action of releasing serotonin in the brain. It soon became apparent that the clinical effects of the tranquilizers were related to the change in the brain amines.

The findings of Brodie and Shore with Rauwolfia prompted the theory that serotonin and norepinephrine are involved in synchronizing circuits in areas of the brain that influence functions beyond conscious control. This suggested that drugs which act on the brain to influence such automatic functions might act through the release or accumulation of amines in these nerve centers.

The first MAO inhibitor studied in this con-

2. Drs. Prockop, Shore, and Brodie disclosed their findings on the anticonvulsant effects of MAO inhibitors on August 25, 1958 at a meeting of the American Society for Pharmacology and Experimental Therapeutics in Ann Arbor, Michigan.

nection was iproniazid (Marsalid), a synthetic stimulant which has gained wide use as a "psychic energizer" for the treatment of depressed mental states. In view of the earlier findings with tranquilizers and in the light of the new theory about the mechanisms of centrally acting drugs, it was no surprise to the Institute scientists to discover that the anticonvulsant and stimulating effects of iproniazid are correlated with an increase in the amines in the areas of the brain from which automatic functions are thought to be regulated.^{2, 3}

JB 516 was synthesized originally by Dr. John Biel of Lakeside Laboratories in Milwaukee in a search for longer lasting dextedrine-like substances.

In collaborative studies with Dr. Shore, Dr. Sydney Spector, and Dr. Brodie of the Heart Institute, Dr. Biel found that JB 516 is about fifty times as potent an inhibitor of MAO as iproniazid.⁴ This drug, and others of the "JB" series from Lakeside are now undergoing intensive study for the treatment of depressed mental states, as well as hypertension and epilepsy.

BENEFIT PAYMENTS BY HEALTH INSURANCE

Benefit payments to Americans covered by health insurance through insurance company policies exceeded \$2 billion during the first nine months of 1958 according to the Health Insurance Institute. This represents an increase of better than 10% over the same period in 1957.

According to the latest Consumer Price Index of the U. S. Department of Labor, the cost of medical care in the country has risen by 4.5% over last year.

Reports from the nation's insurance companies showed that, from January 1 through September 30, 1958, benefits paid under group health insurance policies covering the costs of hospital, surgical and medical care and loss of income totaled \$1.5 billion, an increase of 11% over the first nine months of 1957. Benefits through individual and family type policies, the Institute said, increased by 9% to \$506 million.

Of the five major types of health insurance—major medical expense, hospital expense, surgical expense, regular medical expense and loss of income—major medical showed the greatest increase in benefits paid.

3. Spector, S.; Prockop, D.; Shore, P. A., and Brodie, B. B.: Effect of iproniazid on brain levels of norepinephrine and serotonin, *Science* 127: 704 (March 28) 1958.

4. Biel, J. H.; Drukker, A. E.; Shore, P. A.; Spector, S., and Brodie, B. B.: Effect of 1-phenyl-2-hydrazinopropane, a potent monoamine oxidase (MAO) inhibitor, on brain levels of norepinephrine and serotonin, *J. Am. Chem. Soc.* 80: 1519 (March 20) 1958.

Benefits received by holders of major medical expense policies, which help defray the cost of serious or catastrophic illness, increased by 89% over the same period last year to total nearly \$167 million. This sum, divided between the \$162 million paid through group plans and the \$5 million paid to the holders of individual policies, already surpasses the \$130 million in benefits paid out during all of 1957. These figures, the Institute added, include policies written alone or to supplement the basic hospital, surgical and medical coverages.

Persons covered under hospital expense policies, which help pay for the costs of hospital care, received a total of \$794 million, with \$622 million received through group policies, and \$172 million under individual insurance policies.

Surgical expense insurance, which helps reimburse the insured for operations, accounted for \$297 million in benefit payments, with \$242 million going to those protected under group policies, and \$55 million paid to individual policyholders.

Payments by insurance companies to persons covered by regular medical expense policies, which help pay for medical care and treatment other than surgery, amounted to \$56 million by September 30, the Institute survey showed. Of this total, \$49 million was paid out under group plans, and \$7 million through individual policies.

Persons insured against loss of income due to sickness or disability received an estimated \$595 million as income replacement, with \$376 million paid through group policies, and \$219 million under individual policies.

In concluding its report of health insurance benefits paid by insurance companies, the Institute stated that the increase in such payments reflects the growing importance to the American people of health insurance as a means of helping finance medical care.

HOSPITAL EMPLOYMENT OF THE DISABLED

Hospitals can solve some of their personnel shortages by employing the handicapped and the elderly, two hospital executives pointed out in the November 16 issue of *Hospitals*, Journal of the American Hospital Association.

Dr. J. A. Rosenkrantz, administrator, Albert Einstein Medical Center, Southern Division, Philadelphia, and Dr. Pascal F. Lucchesi, executive vice-president and medical director, Albert Einstein Medical Center, Philadelphia, reported that a study at the medical center showed "the work records and achievements of the disabled often surpass those of normal personnel."

"In times when personnel shortages are prevalent, therefore, the handicapped and aging popu-

lation can serve as a reservoir of competent help. As rehabilitation programs become more effective, state and federal support has made it possible for increasing numbers of the handicapped to join the working ranks," the authors said.

The growing proportion of the population in the older age brackets may make it more difficult in the future to fill all jobs with young and healthy employees, Dr. Rosenkrantz and Dr. Lucchesi pointed out.

"This will necessitate a revised attitude toward utilizing the older worker, not only in jobs that require a minimum of strain, but also in jobs where the introduction of more modern and efficient equipment results in less strain on the individual," they added.

Hospitals can set a good example by employing the aged and handicapped, the article said. It suggested that members of the hospital staff use their expert knowledge to make sure these workers receive the proper job assignments. When the work requires special training, hospitals can easily supply it, since they are already geared to in-service training programs, the two physicians said.

The authors reported that 47 of the 780 employees at the Albert Einstein Medical Center are handicapped, and 40 of these hold jobs which require some physical effort. A study of the work records showed that absenteeism was less for the disabled employees than for the normal employees, Dr. Rosenkrantz and Dr. Lucchesi said.

"Absence for minimal disease, as a mild cold, was rare in this group. These individuals had a far better record in this respect than the average normal employee. Evidently a disabled person feels a need to demonstrate his abilities," the authors said.

Efforts are made at the medical center to place the handicapped person in the job where he can function most effectively, and to reassign him according to changes in disability, the authors added.

1959 ATLANTA GRADUATE MEDICAL ASSEMBLY

Plans have been completed for the largest and most complete Atlanta Graduate Medical Assembly in the seventeen-year history of this most popular Dixie Medical Meeting.

The dates have been set for February 16, 17 and 18, 1959, at, as usual, the Convention Hall of the Atlanta Biltmore Hotel.

An exceptionally comprehensive speaking faculty has been selected this year offering the widest variety of medical specialty topics ranging from Allergy to Nuclear Medicine. Each speaker is a recognized leader in his field and each has made prominent and recent contributions to the profes-

sion for which he has received wide acclaim. The names read like a "Who's Who" in the latest outstanding medical achievement poll.

The fourteen speakers, their specialty fields and home bases are:

Internal Medicine, Dr. Stewart Wolf, University of Oklahoma in Oklahoma City; Allergy, Dr. Ethan Allan Brown, Boston; Endocrinology, Dr. Edward H. Rynearson, Mayo Clinic, Rochester; Gastroenterology, Dr. William G. Sauer, Mayo Clinic, Rochester; Hematology, Dr. William Dameshek, New England Center Hospital, Boston; Surgery, Dr. B. Marden Black, Mayo and Dr. Warren H. Cole, University of Illinois, Chicago; Cardiovascular Surgery, Dr. Denton A. Cooley, Baylor University, Houston; Pathology, Dr. Averill A. Liebow, Yale University, New Haven; Radiology, Dr. Charles M. Nice, Jr., Tulane University, New Orleans; Anesthesiology, Dr. Vincent J. Collins, New York University, Bellevue Medical Center; Obstetrics and Gynecology, Dr. Curtis J. Lund, Strong Memorial Hospital, University of Rochester; Pediatrics, Dr. A. Ashley Weech, University of Cincinnati; and Nuclear Medicine, Dr. Lee E. Farr, Brookhaven National Laboratory, Upton, Long Island.

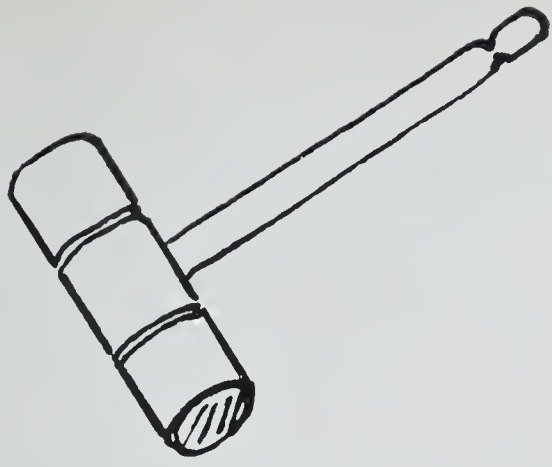
A most popular feature of the Atlanta Graduate Medical Assemblies of recent years has been the scheduling of "Luncheon Conferences" and small afternoon "Roundtables" where attending doctors can get together informally in small groups with one or two of the visiting speakers and exchange questions and answers in an easy, relaxed "no holds barred" fashion. More of these popular luncheon conferences and roundtables have been added to this year's A. G. M. A. schedule in response to increased demand.

Not all topics discussed are strictly medical. For example, Dr. Charles M. Nice, Jr., who comes from Tulane University School of Medicine to address the Assembly in regular session on his specialty, Radiology, is also one of the nation's recognized top authorities on "Dixieland Jazz." He will lecture on this "topic" at a special expanded Luncheon Conference on Tuesday, February 17, to which the attending doctors' wives are invited with their husbands—a rare and appreciated privilege.

Last year, 1958, over sixteen hundred medical people attended the A. G. M. A. This year an even larger record crowd is expected.

Advanced registration fee is \$15.00 and saves a lot of time and confusion. Checks should be addressed to the Atlanta Graduate Medical Assembly, 875 West Peachtree Street, N. E., Atlanta 9, Georgia.

A. G. M. A. in cooperation with the G. A. G. P. is acceptable for fifteen hours in Category I.



President's Page

COUNTRY PRACTICE

A committee composed of several members of our Association and some of the responsible members of our Legislature recently met in Montgomery to discuss the problem of locating doctors in smaller towns and more particularly the program of scholarships to the Medical College as it applied to the problem. As you know, the law of Alabama provides for six scholarships annually. These scholarships provide \$5,000.00 for the four-year medical course. A recipient of the scholarship must agree to practice medicine for five years in a smaller Alabama town. The Board of Health is charged with the responsibility of preparing a list of the smaller towns where doctors are needed. The recipient may select from this list. The law provides that the recipient might be relieved of his obligation by repaying the \$5,000.00. It was hoped that this would provide six doctors each year who would go into practice in small towns and that after five years they would have found the practice so satisfactory that they would decide to stay. After four years operation of the law it becomes apparent that it is asking a great deal of a young man of around 22 years to commit himself to a type of practice and a way of life four years before he has prepared himself for it. Many of the young men may repay the \$5,000.00 and be relieved of their obligation. The law does not spell out any moral obligation for being given the opportunity to study medicine which they might not have had otherwise. Even if all six men went into practice in small towns it was also apparent that it would not fill their need for doctors. The committee considered several measures to improve the present law but time did not permit to explore the whole problem.

Our Association presently operates a physicians placement bureau. The bureau receives requests from communities seeking a doctor. The community is surveyed and pertinent information is recorded. This information is made available to doctors who are interested in locating in Alabama. There are certain essential requirements that a community should meet in order to attract a physician. Certainly it should have adequate schools so that his children can be educated. It should have churches. The population should be large enough

to support a doctor, or perhaps two doctors. The practice of medicine is such that there will always be cases that are too sick to leave and good doctors do not leave them. In the interest of his health and efficiency a doctor needs time off. This can be accomplished by two doctors working as a team. Today young graduates recognize this and often go out in such teams. The community's financial responsibility might also be indicated by the presence of a bank. I also feel that a small hospital should be within usable distance. Doctors today are taught to use the aids of a laboratory and x-ray and it is difficult for them to practice without them. Also, they need a place to treat infections such as pneumonia and to handle their obstetrical cases. The Hill-Burton Program as administered in Alabama has gone a long way toward placing these small hospitals over the State and I am sure will aid in the distribution of doctors.

The final solution to this problem may be in a greater output of doctors from the medical schools. Medical schools are costly to build and expand, so help from this direction cannot be expected too soon. The teachers in our schools might give some thought to a training program that fits the graduates for general practice. An even more intangible aim might be a change in the young doctor's attitude toward practice in the country as compared to practice in large cities. There are times now when I think I can see a swing in favor of country practice. I often wish that young doctors could have known practice in a small town as my father practiced it. The country doctor becomes a big man in his community. His education and his daily contacts over the years with many people during their periods of stress make him a man of great tolerance and judgment. People come to him for counsel and help. They name their babies for him as a mark of their esteem. Almost always he becomes a deacon, elder or vestryman in his church. He may serve several times as the mayor of his town. Rarely, he may be the head of the local bank. Besides living a life filled with appreciated, interesting service a country doctor usually does well financially. There may be a few in the larger cities who make more money but there are many who do not do as

well. Certainly it is easier to get started in a smaller community. Compared to the esteem and respect of his patients and neighbors this may seem secondary, still financial stability is important and patients hold a doctor in higher esteem when he has it.

Colgan J. Furman



ORGANIZATION SECTION

PUBLIC RELATIONS COMMITTEE PUBLIC SAFETY PROGRAM

A HOLIDAY MESSAGE FROM THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

DRIVE CAREFULLY—

SO WE CAN TAKE A HOLIDAY, TOO.

Do You Know that more Alabamians died from accidents involving motor vehicles in 1956 than from tuberculosis, polio, appendicitis, influenza, rheumatic fever, anemia, pellagra, malaria, typhus, drownings, burns, measles, diphtheria and whooping cough combined?

Do You Know that accidents involving motor vehicles took more than 40,000 lives in America in 1956—the largest ever recorded—and that motor vehicle accidents were responsible for almost half of all accidental deaths?

Do You Know that 5,070 persons were injured in 1957 on rural Alabama highways?

Do You Know that last December accidents involving motor vehicles in Alabama were responsible for a total of 87 deaths?

REMEMBER, DRIVE CAREFULLY SO WE CAN TAKE A HOLIDAY, TOO—

If you don't and are involved in an accident, it's our duty to patch you up and then the holiday will be spoiled for both of us.

TO PROVE YOU KNOW—DRIVE SLOW.

Presented through the
cooperation of
Alabama Highway Patrol

SOME CAUSES OF MOTOR VEHICLE ACCIDENTS*

A recent investigation into one aspect of the motor-vehicle accident problem, violations by drivers in fatal accidents, showed that nearly one-third were exceeding the speed limit, or a safe speed, at the time of the accident. In urban areas, violating right-of-way was the next most common condition. In rural areas, failure to keep to the right of the center line followed in importance. In 22 out of 100 fatal accidents, a driver or an adult pedestrian had been drinking. "Driving while under the influence of alcohol" was a factor in 7 per cent of all fatal accidents.

The weather was rainy, snowy, or foggy in one out of six fatal accidents, and in nearly as many cases there was some obstruction to the driver's vision. In one out of 12 fatal accidents an unsafe condition was reported in at least one of the vehicles involved, most often unsafe brakes. About one out of 14 drivers had a physical condition—most often they were asleep—that could have had a contributing factor in the accident. About the same proportion of pedestrians in fatal accidents had physical defects.

Over one-fourth of the drivers in fatal accidents were between 18 and 24 and nine out of ten were men.

TO PROVE YOU KNOW—DRIVE SLOW

Another Public Service
of the
Committee on Public Relations
of
The Medical Association
of the State of Alabama

*Courtesy, Health Information Foundation

As this issue goes to press, 100,000 of these leaflets have been ordered for distribution to Alabama's motoring public during the holiday season. This effort in the interest of public safety is made possible through the courtesy of the Alabama Highway Patrol whose members have offered to hand the leaflets to drivers at courtesy stations throughout the State.

SPECIAL STUDY GROUP ON MEDICAL SCHOLARSHIPS

At the request of the Committee on Public Relations, Dr. Givhan called a meeting of the Special Study Group on Medical Scholarships on November 16, 1958. The request grew out of knowledge gained from Physician Placement Service; the purpose of the meeting was to consider medical scholarships which are presently in force in Alabama.

Dr. J. Paul Jones was elected chairman and Senator Walter Givhan, vice-chairman by the following who attended the initial meeting: Dr. E. G. Givhan; Dr. M. Vaun Adams; Dr. R. C. Berson; Dr. Ben Branscomb; Dr. Douglas L. Cannon; Dr. W. R. Carter; Senator Roland Cooper; Dr. D. G. Gill; Mr. M. D. Gilmer; Senator Givhan; Dr. Jones; Dr. Paul Nickerson; Mr. Walter Randolph and Dr. R. O. Rutland, Jr.

After discussion of state and county scholarships, it was decided that the chairman should appoint a subcommittee to prepare a bill which would encompass the recommendations of the study group; that the subcommittee should submit its proposal to the full group at a later meeting to be called by the chairman; that additional groups would then be called in to seek support for the proposal. Dr. Rutland has been named chairman of the subcommittee; Dr. Gill, Senator Givhan, and Senator Cooper have been named as subcommittee members.

ANNOUNCEMENTS

DR. LYONS NAMED CHAIRMAN OF REGENTS

Dr. Champ Lyons, head of the Department of Surgery, Medical College of Alabama, has been elected chairman of the National Library of Medicine Board of Regents. Dr. Lyons has been a regent since 1956; this is his last year.

AMERICAN COLLEGE OF SURGEONS, ALABAMA CHAPTER, TO MEET

The Eighth Scientific Meeting of the Alabama Chapter of the American College of Surgeons will be held at Grand Hotel, Point Clear, Alabama, on Friday and Saturday, February 13 and 14, 1959. Registration will open at 8:00 a. m. on the first day.

The invocation will be offered by the Reverend David H. Edington, Mobile. Dr. Hiliary H. Henderson, President, and Dr. Arthur I. Chenoweth, President-Elect, Alabama Chapter, A. C. S., and Dr. John M. Slaughter will preside at the scientific sessions. Subjects and speakers will be:

Spastic Colon and Its Abdominal Manifestations—
Frederick W. Smith, M. D., Huntsville.

Cerebral Claudication—

John M. Cameron, M. D., Montgomery.

Regional Perfusion of Malignant Neoplasms—

Oscar Creech, Jr., M. D., New Orleans.

Remarks by a Pediatrician—

Wallace A. Clyde, M. D., Birmingham.

Duodenal Obstruction Due to Incomplete Rotation of the Bowel—

James H. Erwin, M. D., Mobile.

Head Injuries—

J. Garber Galbraith, M. D., Birmingham.

General Principles of Management of Abdominal Trauma—

Julian K. Quattlebaum, M. D., Savannah.

Films: 1. Inguinal Hernia and Hydrocele in Infants and Children.

2. Safe and Conservative Treatment of Lesions of the Female Breast.

(Projection Service is provided by the courtesy of the Bedsole Surgical Supply Company, Mobile, Alabama.)

Special Problems in Surgery of the Aged—

O. Emfinger, M. D., Union Springs.

Tumors of the Colon and Rectum—

Richard B. Cattell, M. D., Boston.

Carcinoma of the Cervix—Present Concepts of Diagnosis and Therapy—

Richard W. TeLinde, M. D., Baltimore.

Tumors of the Breast—

Moderator: Joe M. Donald, M. D., Birmingham.

Discussants: Drs. Cattell, Creech, Quattlebaum and Champ Lyons.

Dr. Paul R. Hawley, Director of the American College of Surgeons, will be guest speaker at the luncheon on Friday—his subject, "Your College; Its Past, Present and Future." Dr. James G. Donald, Mobile, will preside.

On Friday evening, Mr. Earl L. Tucker, Thomasville, Alabama, will appear as banquet speaker, the subject of his address being "Alabama."

Arrangements have been made for members and their wives to participate in sightseeing and golf, bridge and a cocktail-tea-dance at the Lakewood Club.

A registration fee of five dollars will be charged and will include the luncheon on Friday. Banquet tickets will be available at the registration desk.

ALABAMA ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

Scientific sessions of the Academy will be held simultaneously with the sessions of A. C. S. Dr. Henry M. Dismukes, President, will preside and the program will be presented by Dr. James B. Costen, St. Louis, and Dr. George M. Haik, New Orleans. Registration will be at the College of Surgeons desk.

AMERICAN CANCER SOCIETY SEMINAR

A cancer seminar for Alabama doctors will be conducted by the American Cancer Society, Alabama Division, Incorporated, at the Tutwiler Hotel, Birmingham, on Wednesday and Thursday, January 28-29, 1959.

Dr. Champ Lyons, Birmingham, Dr. John Day Peake, Mobile, and Dr. Joe Donald, Birmingham, will moderate the three scientific sessions. An outstanding program will be presented by nine top flight speakers from six states.

Cooperating with the Cancer Seminar in the presentation of the seminar are the American College of Surgeons, Alabama Academy of General Practice, Jefferson County Dental Association, Jefferson County Medical Society, Medical Association of the State of Alabama and the Medical College of Alabama.

Attendance at the sessions is acceptable to the American Academy of General Practice for Category I Study Credit for its members.

ALABAMA ACADEMY OF GENERAL PRACTICE MEETINGS

The Eighteenth Postgraduate Seminar of the A. A. G. P. will be held in conjunction with the American Cancer Society seminar at Birmingham on Wednesday and Thursday, January 28 and 29.

At the end of the sessions on cancer, on Thursday, a 2-hour symposium on diabetes will be presented at the Tutwiler Hotel under the direction of Dr. L. S. Smelo. All physicians are invited to attend.

The annual business meeting of the Academy will be held at the luncheon on Thursday, January 29, and the annual banquet on Thursday evening, both at the Tutwiler Hotel. Mr. John Temple Graves, II, will be the banquet guest speaker and his address will be on the famous Ambroise Paret statement, "I Dressed His Wounds and God Healed Them." Banquet tickets will be available at the registration desk.

NATIONAL FOUNDATION SCHOLARSHIPS

The National Foundation has announced a multimillion dollar scholarship program for students of medicine, nursing, physical therapy, occupational therapy, and medical social work.

A minimum of 505 Health Scholarships will be offered each year, the first of them before the end of the 1959 school year. They will be made available on a geographic basis and Alabama will receive fifteen scholarships (3 in each health profession).

Awards, taking financial need and scholastic achievement into consideration, will be made by

state and territorial committees composed of members of the five health professions. Each awardee will receive \$500.00 a year, or a total of \$2,000.00. Renewals and payments for the second, third and final years will be contingent upon satisfactory progress.

The National Foundation's chapters, numbering more than 3,100, will have an active part in the program. They will seek and accept Health Scholarship applications, pass them on to state or territorial professional committees for selection, and will present awards to winners. Winners are not committed to work in health fields of special interest to The National Foundation, such as polio, arthritis, or birth defects. Scholarship recipients are, however, expected to serve the health field at large, working in areas for which they are prepared.

Confidence Vital in Doctor-Patient Relationship—

Confidence is the major ingredient of a successful doctor-patient relationship, an Ohio general practitioner said recently.

"I can't stress enough the beneficial effects of complete trust in your family doctor. It's important to you and to him," said Dr. Thomas E. Rardin, Upper Arlington, a Columbus suburb.

The doctor's observations appeared in an article in December's Today's Health, a publication of the American Medical Association.

Without this confidence, the 52-year-old physician said it's pretty hard for a doctor to help his patients intelligently because their innermost thoughts and secrets play such a big part in problems requiring medical attention.

"In my practice, I've found that emotional problems are present in almost every physical disorder. Well over half of all ailments I see are caused by apprehension, fear, and anxiety," the physician noted.

To better understand a patient, Dr. Rardin urges his fellow practitioners to develop a sense of humor, a quality of hope, and a deep affection for human beings. "These tools are every bit as important as the instruments in the doctor's bag," he said.

"Maybe I'm especially conscious of this because I spent a good many months as a patient myself. I had a leg amputated four years ago. I've been back at work, making my rounds on my one good leg and a pair of crutches," the doctor added.

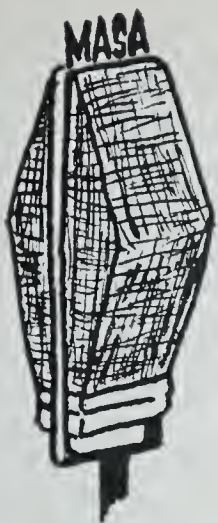
A practitioner for more than 25 years, Dr. Rardin said that we can't go back to horse-and-buggy days or horse-and-buggy doctors, but personal relationship is just as important today as it was when he started practice.

He believes that both doctors and patients can have this personal relationship if people will do two simple things:

—Recognize the importance of having a family doctor who is intimate with all their problems.

—Look around to find a doctor to whom they feel they can confide these problems completely—then stick with him.

According to Dr. Rardin, "The results can be tremendously important to the patient. And they will make a rewarding profession even more so to the doctor."



ASSOCIATION FORUM

PROFILE OF THE PRACTICING PHYSICIAN

(Reprint from *Health Bulletin for Teachers*—June 1958. This article is reproduced as an example of good health material that is being disseminated by a non-medical group.)

"Fifty years of service to medicine! As I look back and consider other careers that I might have chosen, I sometimes feel that I would settle for a less arduous calling. But on more sober thought, I know there could be but one life for me—the life of a doctor."

These words were spoken by a physician whose name is all but unknown beyond the borders of the community which he has served for half a century. Yet, this simple quotation is an appropriate prelude to our "Profile of the Physician."

In the first place, it bespeaks the deep devotion which most physicians feel for the fraternity of medicine. In the second place, it explains why the great rank and file of doctors make medicine such a vital, comforting, and reassuring thing in the lives of the people they serve. It is your doctor and mine—using in his daily rounds the hard-won knowledge of the masters, upholding in his daily life the ethics and traditions of the healing art—who makes the practice of medicine so beneficent a science.

What, then, of the true physician—his skills, his ideals, his ethics? How does he come by them? What personal traits make him worthy of the title, Doctor of Medicine? What new missions beckon him? And, finally, what are his rewards?

THE MAKING OF A PHYSICIAN

Sir William Osler, that immortal physician, once said that "work is the master word in medicine." It begins on the very first day of the doctor's training and it increases each day thereafter. Preparation for the practice of medicine, perhaps more than for most other human undertakings, is a combination of unending work and study.

Various experiments have been tried to make the academic training of physicians less burdensome. But these plans have only demonstrated that there can be no shortcuts in the making of a physician. In fact, authorities generally agree

that the long and difficult years of preparation—including two to four years of premedical study—are necessary if we are to continue to have physicians educated in the best traditions of both the humanities and the sciences.

Actually, education for a scientific career may well begin in childhood when a youth becomes absorbed in the world of growing things. Or, it may start in a high school biology laboratory when the wonders of the more primitive forms of life unfold before youthful eyes. It would be a splendid thing if all of us—especially parents and teachers—could detect the very earliest stirrings of scientific curiosity in the young mind and encourage them from the outset.

Fortunately, the "raw materials" of which physicians are made are sometimes plain to see. We should watch for a genuine interest in "the how" and "the why" of things. We should watch, too, for a more than ordinary curiosity about the structure and functions of the human body. (What makes blood red? What makes the heart beat?) And we should be alert to the young person whom others of the same age instinctively trust. A noted medical educator has cited this as "a good sign of the budding doctor."

As to the physician's formal education, most medical schools still divide the four-year course into preclinical and clinical halves. The first two years of the prospective doctor's studies center upon the normal structure and functions of the human body and the diseases that beset it. These are the years of books and microscopes and laboratory experiments devoted to learning the architecture of the body and its "biological wisdom." There is an increasing trend in many schools, however, to provide students from the start of their training with experience in family and community health problems.

In the last two years, the student passes from the classroom to the hospital wards and clinics where he begins to breathe the atmosphere he has longed for. There, under the guidance of professors skilled in various specialties, he examines and treats patients—and sharpens his powers to observe and deduce, sometimes with

the aid of diagnostic instruments, and always with eyes, ears, and hands which will become increasingly sensitive to manifestations of health and disease.

Although the medical student becomes well versed in the marvelous complexity of the human body and its responses to an incredible number of insults, the aim of the medical school is not to produce a full-fledged doctor. Nor do one or two more years of hospital internship following graduation produce the complete physician. Indeed, his schooling and hospital experience give him only a good grasp of the fundamentals of medicine. And upon this basic knowledge he will build for the rest of his days because medicine, like so many other fields, is never static.

THE MOTIVES FOR MEDICINE

Medicine is no easy path to great riches. The motivations for embarking on a career in medicine are many. Perhaps one derives from an in-born love of science as applied to life and health. And the person who experiences this love simply cannot contemplate any other mission. Medicine may lure a few who see in it the opportunity to win fame by doing the spectacular—to performing seemingly impossible operations, for example, or discovering the cure for cancer. Many medical careers are also shaped by family traditions or by the desire to follow in the footsteps of a physician whom one has admired. Though the motivations for choosing medicine as a career do vary, the best medical students and the best doctors are surely those who have a genuine interest in science, an equally genuine interest in people, and a sincere desire to serve their fellow men.

THE CHARACTER OF THE PHYSICIAN

While education, training, and experience are basic requirements for a well-rounded physician, certain personal qualifications for the profession are no less important. Dr. James A. Miller has written: "There is need for those other factors which are moral, ethical, or even spiritual to complete the equipment of the true physician. These factors are the imponderables, but they are none the less the essentials. They determine the quality of the individual in relation to his patients, to his fellow practitioners, and above all to his own inner self."

Since medicine was born of the sympathy of man for man, the physician, if he is to be a true physician, should have a great capacity for sympathy, the courage to act when delay could mean the difference between life and death, the ability to influence people for their own good, and a reverence for life. In addition, the physician needs good judgment, patience, optimism, equanimity, honesty and, most important, a warmth and ten-

derness of personality that will bring confidence and calm to distraught individuals. Dr. Hans Zinser observed that "when such qualities come together in an individual who chooses the calling of Medicine, then we have the great physician."

THE PHYSICIAN'S ETHICS

More than three centuries before the birth of Christ the physician's way of life was spelled out in the Oath of Hippocrates. The maxims and ideals of conduct which this noble document specified are still subscribed to by physicians all over the world. It could serve as a guide to good conduct in all walks of life. To cope with changing times and conditions, physicians have also established "codes of ethics." In the medical sense, ethics is defined as "the science of values in relation to the conduct of life as a whole." Among many items found in a recent ethical code of the American Medical Association, one of the most altruistic is that during disasters and epidemics the physician will continue his work without regard for his own health or safety. It is significant that the oaths, codes of ethics, and rules of conduct to which physicians are bound are formulated primarily for the welfare of patients and secondarily for the continuing good name of the medical profession.

HOW THE PHYSICIAN'S PRACTICE CHANGES

As the world changes, so does the practice of medicine. Years ago, the physician was primarily a family doctor possessed of deep understanding and practical wisdom, but with no more than a handful of really effective weapons against disease. Now the doctor has a wealth of amazingly effective therapeutic agents and improved techniques for the diagnosis, prevention, and treatment of diseases.

It appeared for a time that rapid strides in the science of medicine would submerge the ancient art of the physician. Fortunately, however, the art of medicine has been saved by the physicians themselves, because they realize that they need to know people and their worries and problems almost as well as they know physical signs and symptoms. Dr. Harvey Cushing underscored this years ago when he said: "A warm, friendly relation with a patient may often yield information more valuable to the physician than anything revealed by a laboratory test."

To bring the art of the physician to its fullest flower, many medical schools now assign their first-year students to small groups of patients selected for family care. The student is introduced as a doctor in training to "his family," the patients are informed that he will not treat them, but will act as an advisor on problems of health. Thus, the student learns at the outset of his medical career that illness can be caused or complicated by

worries over the family budget, the morning's headlines, or whether Johnny will make it through high school.

Progress in medicine as a science has, however, brought about many changes in the physician's practice. Since no one man can master the whole of modern medicine, specialists have come to play a larger part in the care of the sick. There are at present 15 or more "Specialty Boards" to certify physicians capable of pursuing the specialty of their choice. To be eligible for a specialty certification, the physician must be a graduate of an approved medical school and must have had at least five years of postgraduate training and experience before admission to a rigid written and oral examination. The specialist, in cooperation with the general practitioner, has greatly improved the treatment of many illnesses.

Physicians are making increased use of hospitals where they find a concentration of skills, special knowledge, and facilities available for the benefit of patients. Medicine, then, is becoming more and more a matter of teamwork.

Greater freedom from many time-consuming practices of the past allows the physician of today to devote more of his efforts to preventive medicine. In fact, more people than ever before are turning to him for health counseling. We look to him for advice on nutrition, exercise, rest, relaxation, accident prevention, and other matters that affect health. Mental and emotional disorders which were once either endured or charged off to personal peculiarities are now brought to the physician's attention far more often than in the past.

NEW ROLES FOR PHYSICIANS

The physician is no longer "isolated on an island of disease with his patients." His experience and knowledge are being brought to bear on a wide variety of affairs ranging from social issues at the community level to matters that are international in scope. A call to physicians to exert themselves for the betterment of their communities was recently sounded by Dr. David B. Allman, President of the American Medical Association. He urged them to abandon "the ivory tower of professional detachment" and step more actively into community affairs. It is interesting to note in this connection that physicians of earlier times played prominent roles in many activities beyond the scope of medicine. For example, among those who signed the Declaration of Independence, five were physicians.

Evidence of the physician's expanding role is seen almost everywhere—in public health movements, in the formulation of laws to safeguard health, in the promotion of improved social services, in the progress of industrial health, to men-

tion a few.

Physicians are proving themselves to be effective ambassadors of good will for the United States and Canada in foreign lands. Since disease knows no bounds, the physician and his co-workers are "ambassadors" whom we can send forth without doubt that they will be acceptable. This has already been demonstrated by the World Health Organization in its programs for malaria control, better nutrition and sanitation, health education, and accident prevention.

We live at a time when some new and exciting chapters are being added to the history of the human race. For instance, we are now well into the Atomic Era and the Age of Space is dawning. Both of these new ventures pose problems to challenge our best medical minds. Our health and safety in an atomic world may well concern the physician no less than the communicable and chronic diseases with which he has long dealt. Indeed, the physician already occupies a key position in the public health aspects of atomic energy. And the conquest of space will depend largely on the solution of problems in human physiology and psychology. The physician's contributions to space medicine may be of immediate practical value to doctors in current practice since so much is being learned about how the human body responds to stress, strain, and unaccustomed sensations.

YOU AND YOUR PHYSICIAN

The medical profession is often subjected to criticism—and sometimes rightfully so—for certain shortcomings. Yet, most of us in our individual association with our physician find far more to admire than to censure. We recognize that he, having made a study of human behavior, knows a great deal about "what makes us tick." We recognize, too, that his profession has made an enormous contribution to the welfare of humanity.

There are other, if lesser, reasons for the esteem in which we hold the physician. We admire him for the responsibility he carries, the trusts he will not betray, and the discipline he enforces upon himself, often at the risk of his own health and frequently at the expense of his family life.

What are the rewards of a medical career? Perhaps the one that the physician values most is the knowledge that his neighbors look upon him as an indispensable member of the community. He values, too, the privilege of intimate association with all kinds of people, the satisfaction of bringing new lives into the world, restoring the sick and injured to health, preventing diseases and accidents, and easing pain in hopeless illnesses. Such enduring rewards are known only to the physician dedicated and devoted to medicine, both as a science and an art.

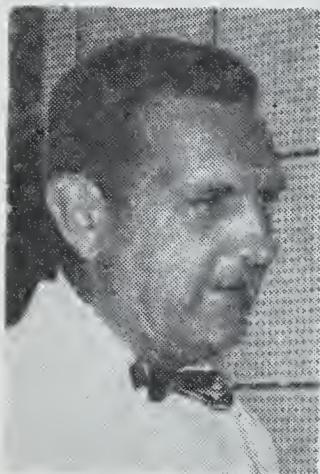


MEDICAL CENTER NEWS

THE VICE-PRESIDENT'S MESSAGE

We have just experienced the first meeting of "alumni and friends" of the Medical College.

This was a significant gathering in many respects. It brought together, for the first time, the men and women who are the first line medical emissaries, so to speak, of our fine Center. They came together in an atmosphere of understanding and knowledge. It seems appropriate that such a meeting become an annual event, one destined to grow each year in meaning for those who attend, as well as for the institution.



The University of Alabama Medical Center is a relatively young organization, and as it steps forward to take its place among the great medical institutions of the nation, it will have more and more to offer, not only to those who are currently receiving their education here, but to the alumni themselves.

At the same time, the development of any institution does not progress without encountering problems and burdens which, rightly, should be borne not only by the active staff and student body but by the men who have gone forward to medical maturity and sufficiency.

The primary mission of a medical school—as of any other professional school—is to help qualified and seriously interested students become just as fine physicians as possible so that they may serve their fellow men in this capacity for the rest of their active lives. This means that there is an inseparable bond, whether recognized or not, between the school and its alumni. If the alumni do well and grow in effectiveness, the stature of the school grows. If the school grows in strength and soundness of program, the standing of its alumni is enhanced.

The alumni both of the School of Dentistry and School of Nursing have, through the years, been closely associated with Medical Center activities, an association which has proven to be effective and gratifying.

Each graduate, in his profession, reflects the training of his institution, and no college is better than the training it dispenses, nor can it long survive without the active interest of its graduates. These are inseparable.

To share with our alumni our measures of progress, our newly acquired "ideas" as well as "ideals," is a vital part of our duty. To share with us their maturity, their guiding spirit, their knowledge, and, yes, their "power," is the vital duty of every alumnus. It is to this bond that we dedicated our first meeting and to a closer future tie that we pledge our hearts and minds.

Robert C. Berson

EIGHT HEALTH AGENCIES TO SPONSOR HEALTH FAIR

Eight health agencies of the state and county have joined hands to stage one of the most spectacular health events of Alabama's history.

The Jefferson County "Health Fair" is scheduled for the Birmingham Municipal Auditorium on May 15, 16 and 17.

Sponsoring organizations include University of Alabama Medical Center, Jefferson County Medical Society, Jefferson County Health Council, Jefferson County Department of Health, Birmingham Hospital Council, Birmingham Retail Druggists Association, Birmingham District Dental Society, and Alabama State Nurses Association, District 1.

Dr. Richard T. Eastwood, Executive Director of the University of Alabama in Birmingham, has been named General Chairman of the event. Joe Vance, Assistant Manager of Blue Cross-Blue Shield, is co-chairman.

Other committee chairmen include Steve Yates, Executive Secretary of the Jefferson County Medical Society, Secretary-Treasurer; John Carr, Director of the Health Council, Coordinator; J. Morgan Smith, Public Information Specialist, Publicity and Promotion; Rutherford Yeates, Vice President of General Surgical Supply, Chairman of Exhibits; William Mandy, American Red Cross, Co-Chairman of Exhibits.

"This will be one of the major health expositions ever to be assembled in our state," Dr. Eastwood said.

The chairman said the Health Fair would not only produce spectacular events but will include some 80 major exhibits of health, medical and dental forces. These will show the rapid development in service and facilities and will underscore career opportunities in various health fields.

DR. WILLEM KLIP JOINS MEDICAL CENTER FACULTY

Dr. Willem Klip, of Utrecht, Holland, has recently joined the staff of the Medical Center as Associate Professor in the Departments of Physiology and Medicine. Dr. Klip obtained his M. D. degree in 1946 from the University of Utrecht where he also earned his Ph. D. degree in Theoretical Physics. He was in general practice for a short time and then, for six years, worked in the Laboratory of Bacteriology. He then worked for five years with Professor Burger in the Laboratory of Physics and University Hospital at Utrecht. Dr. Klip's appointment here is for two years, and he hopes to remain in this country. His particular field is Medical Physics and at present he is doing research in pulse wave velocity as concerned in blood vessel problems. His wife, Thea, and their two little girls, Emmy, two years old, and Marleentje, one year old, are here with him.



Co-editors Go Over New Publication—Dr. Ben Moffett (seated) and Dr. John Sharry.

ALABAMA SOCIETY OF MEDICAL HISTORY LAUNCHES
DE HISTORIA DE MEDICINAE

A new publication containing a wealth of information on the medical and dental history of Alabama is now being published by the Alabama Society of Medical History.

Officers of the Society include Drs. E. B. Glenn, president; Victor Spira, vice-president; Geraldine Emerson, secretary-treasurer; B. C. Moffett, editor; and J. J. Sharry, co-editor.

Dr. Glenn says the formal quarterly bulletin is designed to aid the Society to take its place with the older and more established societies of this type, as well as to generate interest in and distribute informative material to those interested in medical history.

Contributions to the publication in the form of historical papers are always welcome, Dr. Glenn said. He paid special tribute to editors Moffett and Sharry for their "diligent service" and "excellent craftsmanship" in the publication.

DR. LAWRENCE REYNOLDS HERE FOR BRIEF VISIT

Dr. Lawrence Reynolds, donor of the collection of medical books and manuscripts now housed in the library named for him, visited the Medical Center recently. While here he spoke to the students of the Medical and Dental Bibliography Course at Hillman Auditorium. He was also honor guest at a luncheon given by the executive council of the Alabama Society of Medical History, with Dr. E. B. Glenn, Assistant Professor of Surgery, as host. He went from here to Tuscaloosa for Homecoming Saturday.



During his stay here Dr. Reynolds was the subject of an interview by one of the local newspapers and many interesting facts concerning his earlier years were brought to light. Dr. Reynolds remembered the days when he was his father's "eyes." His father was a doctor who practiced medicine for 50 years in Dale County. His father was blind.

Dr. Reynolds said he gave his collection to the University for several reasons—"First, I'm a native of Alabama, and second, I studied at the University and my father and brothers were graduates of the old University of Alabama Medical School in Mobile." Another reason, he stated, is because the Medical Center here "is growing and ultimately will be one of the best in the nation."

ORAL SURGERY DEPARTMENT, ONE OF NATION'S
FINEST, COMPLETELY REDESIGNED

The Oral Surgery Department at the Medical Center has been enlarged, completely renovated and painted, and several new ideas have been put into effect.

Centralized suction and oxygen, which plug into the wall in each of the 10 new rooms, now take the place of the former methods. The suction device vacuum-cleans the blood and infectious material from the mouth during surgery or extraction of teeth. The oxygen plug-in affords on-the-spot resuscitation in cases of shock or choking. Two of the operating rooms also have plug-in nitrous

oxide for anesthesia. Sterilized instruments on sterilized trays are readily available. The clinic was planned by Dr. Charles A. McCallum, Associate Professor of Dentistry and Chairman of the Oral Surgery Department. He and his staff designed the new lay-out of the department.

The department has 90 or 100 patients a day, and extracts an average of 1,000 teeth a month. Because students are taught to make a complete patient examination and to be alert for signs of oral and facial abnormalities, several cases of mouth cancer have been found. (These cases are referred to the tumor clinic for treatment.)

At present, the department has eight interns and residents taking three years specialized postgraduate study. In addition, there are from nine to 12 junior students from the Dental College rotating through the department for a required six weeks course. This oral surgery training program is the only one in Alabama and one of the largest in the nation.

DR. HOMER SMITH SPEAKS BEFORE ALPHA OMEGA ALPHA

Dr. Homer Smith, world-renowned author, lecturer and physiologist, was guest speaker at the annual initiation banquet of Alpha Omega Alpha, national medical honor society, recently held at the Mountain Brook Country Club.

Dr. Walter B. Frommeyer, Professor and Chairman of the Department of Medicine at the Medical Center, and councilor of this group, said "Dr. Smith



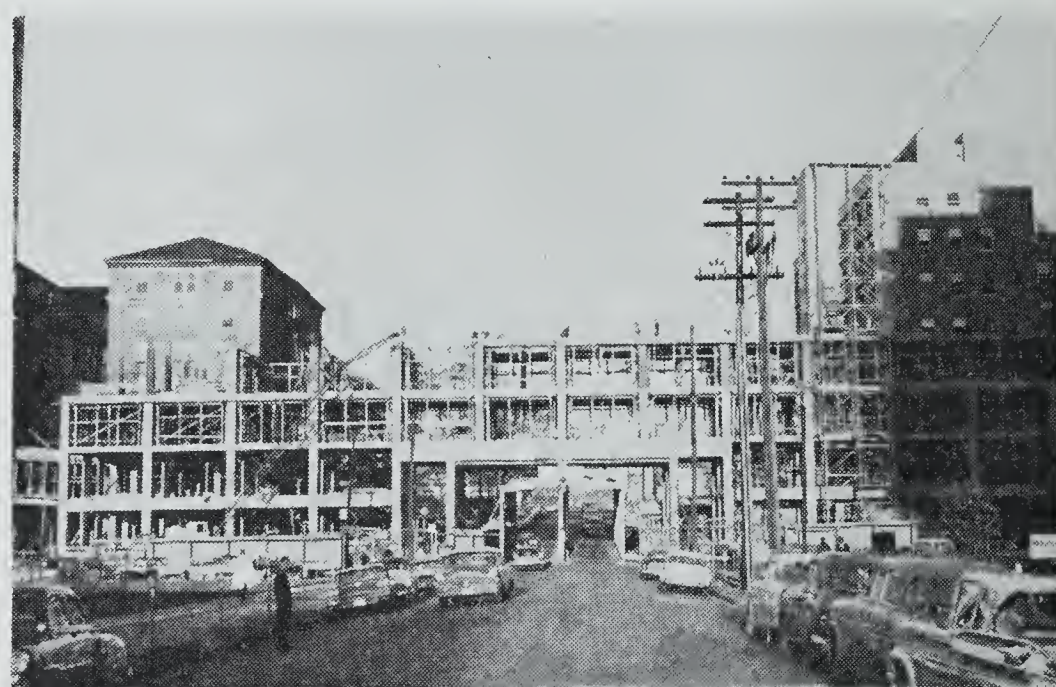
is the most widely known renal physiologist in the world and his presence at the banquet this year made it one of the most outstanding meetings to date."

Dr. Smith has traveled extensively throughout the world, presenting papers on various aspects of renal or kidney physiology. He is the author of numerous

publications and papers on this subject and is much in demand as a speaker.

During the evening, ten new members of the society were initiated into the Alpha Chapter of the Medical College. Keys and certificates were awarded to: Joe Jackson, Beatrice Lampkin and Jack Strong, from the junior class, and Kirven Brantley, Frank Cauthen, Charles Faulk, John Isbell, Harry Phillips, Harry Prater and James A. Walker, from the senior class. Presiding senior members include Sheldon Skinner, president, John Nickerson, vice-president, and Patrick Jones, secretary-treasurer. Mr. Skinner commented that "this chapter was extremely fortunate in having as guest speaker a man of Dr. Smith's stature and everyone in attendance gained a great deal from this event."

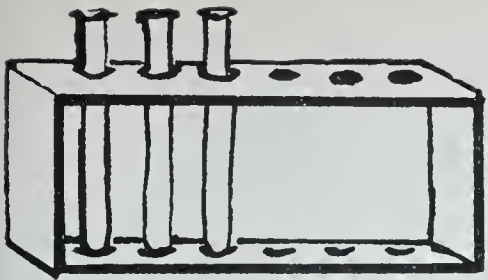
Dr. Smith is Professor and Chairman of the Department of Physiology, New York University College of Medicine, New York City. His topic was "From Fish to Philosophy."



New Research Building Going Up—The above is a recent photo of the Medical Research Building now under construction. Completion of the building, which will afford an additional 100,000 square feet of floor space, is expected the middle of next year. The eight floor structure will connect the present Basic Science Building with the University Hospital. It is unique in design in the fact that it spans Seventh Avenue, and traffic flows uninterrupted beneath its second floor. The building was financed by a Federal grant, matched by money from the State of Alabama derived from a bond issue.

CALENDAR OF EVENTS

TIME	FUNCTION	PLACE
<u>Tuesday</u>		
8:30-9:30 A. M.	Medical Grand Rounds	Hillman Auditorium
9:00-11:00 A. M.	Surgical Grand Rounds	4th F. University H.
12:00-1:00 P. M.	Pathology-Surgery Conf.	Rm. 324 Hillman Build.
4:00-5:00 P. M.	Medical Research Seminar	VAH Rec. Hall
<u>Wednesday</u>		
12:00 Noon-1:00 P. M.	Arthritis Conference	Rm. 324 Hillman Build.
<u>Thursday</u>		
1:00-2:00 P. M.	Medical Pediatrics Surg. CV Conf.	Rm. 324 Hillman Build.
2:00-4:00 P. M.	Critique-Cardiac Catheter Data	Rm. 324 Hillman Build.
<u>Friday</u>		
4:00-5:00 P. M.	Dept. of Med. Death Con.	Board Room Univ. Hosp.
<u>Saturday</u>		
8:00-9:00 A. M.	Medical-Surgical Conf.	Hillman Auditorium
9:00-10:00 A. M.	CPC	Hillman Auditorium



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

SANITATION PROGRAMS

The fact that some diseases are seldom if ever reported in Alabama today does not mean that control measures can be relaxed. This is particularly true of those diseases which have been controlled largely through sanitary measures. Although typhoid, malaria, yellow fever and typhus have all but disappeared, the Health Department cannot abandon the programs which have helped to bring them under control. Instead, factors such as our growing population, increasing industrialization, and technical advances in many fields mean that these programs must continually be strengthened and that new ones must be developed.

The prevention of food, water and vector borne diseases is achieved through programs which do not lend themselves to glowing and dramatic description. By their very nature, they are technical, and, of necessity, often routine. Although every resident of the state benefits from these programs, the tendency is to ignore them or take them for granted unless they are curtailed or there is a breakdown in services. The consequences of such curtailments or breakdowns, dramatic as they might be, would be deemed more newsworthy than the programs themselves.

Prevention of food, water and vector borne diseases is the primary function of the Health Department's Bureau of Sanitation. Currently, activities of this Bureau are carried on in four major areas: protection of public water supplies, safe disposal of human waste, sanitation of food handling establishments, and vector control. The technical staff of the Water Improvement Commission is also assigned to this Bureau. Their work was described in the December issue.

Engineers of the Bureau's Division of Public Water Supplies must devote a large part of their time to the review and approval of plans for water works construction. This portion of their work involves plans for alteration of or additions to existing facilities, as well as plans for new ones. The most important phase of this Division's work, however, is considered to be the supervision of operations through field inspections. Inspection permits continuous evaluation of the physical plant, operation, and maintenance of water treatment and distribution systems. It also means that water works operators may receive individual instruction and consultation when needed.

Water works operators are required to submit water samples to the Health Department Laboratories at periodic intervals for bacteriologic analysis. Personnel of the Division of Public Water Supplies evaluates the results of the analyses and helps operators to take corrective action when necessary.

This Division also has jurisdiction over sanitation of semi-public water supplies and swimming pools. Swimming pool sanitation is becoming an increasing problem, but there is little time which can be spent in this work.

The boom in housing construction during the past few years has placed heavy responsibility on the Bureau's Division of General Sanitation. Much of the construction has been in areas where public sewage disposal facilities are not available. Installation of individual sanitary facilities, such as septic tanks and pit privies, requires close supervision to insure that the public health is not endangered. Such supervision is the responsibility of sanitation officers in county health departments, who receive consultative and training services from members of the state staff. The state staff also reviews and approves plans for subdivisions, schools and trailer camps as related to drainage, waste disposal and water supply. Criteria for subdivision sewage disposal systems have been developed by the Division which has, for a number of years, carried on continuous research aimed at improving the efficiency and lowering construction costs of small sewage disposal systems.

Certain food handling establishments in the state cannot operate without permits issued jointly by the State Health Department and the appropriate county health department. The permits are issued on the basis of inspections made by personnel of the Bureau's Division of Inspection and county sanitation officers. Regulations governing operation of these establishments have been developed by the Division of Inspection and adopted by the State Board of Health. There are approximately 18,000 establishments subject to the regulations. In addition to restaurants, they include dairies, pasteurization plants, slaughterhouses, hotels, bakeries and poultry processing plants, among others.

Vector control is probably one of the least familiar activities of the Health Department. Since malaria is not presently a problem in Alabama, there is no need for a large scale mosquito abatement program. The Bureau's Division of Vector Control's main function here is to regulate impounding of water so that mosquito-breeding areas

will not result where impoundages are constructed.

Most of this Division's efforts are directed toward promotion of over-all programs of insect and rodent control. Adequate provision for garbage disposal is a major problem for most municipalities today. The rapid growth of our cities and their surrounding suburban areas has made it more and more difficult to find sites for open garbage dumps that will not result in severe nuisance for a part of the population. Open dumps are not only unsightly and odor-producing but, more important, they provide excellent breeding grounds for rats and flies which carry a number of serious human diseases. The Division of Vector Control and county sanitation officers work with municipal officials to help them arrive at satisfactory methods of garbage disposal. Efforts are made to promote the initiation of basic preventive measures as superior to rodenticidal and insecticidal programs as the means of controlling flies, mosquitoes, rats and roaches.

During the past few years these programs of the Bureau of Sanitation have been endangered by a severe shortage of trained personnel. As was pointed out earlier, the demand and need for services tends to increase rather than decrease. In all probability there will also be a demand for new programs in the future. The dangers of air pollution are receiving more and more emphasis. Safe disposal of radio-active wastes could become a public health responsibility. Outbreaks of encephalitis could create anew the need for large scale mosquito abatement campaigns. New industry brings new problems in regard to industrial waste disposal. These programs, new and old, are basic to protection of public health. Their future appears to be directly related to the availability of adequately trained personnel.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director
SPECIMENS EXAMINED

November 1958

Examinations for diphtheria bacilli and Vincent's	109
Agglutination tests	438
Typhoid cultures (blood, feces and urine)	509
Brucella cultures	3
Examinations for malaria	16
Examinations for intestinal parasites	2,191
Darkfield examinations	5
Serologic tests for syphilis (blood and spinal fluid)	20,862
Examinations for gonococci	1,381
Examinations for tubercle bacilli	2,940
Examinations for Negri bodies (smears and animal inoculations)	184
Water examinations	1,903
Milk and dairy products examinations	3,871
Miscellaneous examinations	3,275

Total 37,687

Tuscaloosa Branch Laboratory report not received in time to be included in this report.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS
1958

	Oct.	Nov.	E.E.* Nov.
Typhoid and paratyphoid	9	8	1
Undulant fever	0	2	1
Meningitis	3	12	10
Scarlet fever	65	88	77
Whooping cough	7	2	54
Diphtheria	8	9	45
Tetanus	1	2	3
Tuberculosis	174	164	171
Tularemia	1	0	0
Amebic dysentery	3	0	1
Malaria	0	0	1
Influenza	53	96	281
Smallpox	0	0	0
Measles	28	75	73
Poliomyelitis	7	18	15
Encephalitis	1	1	1
Chickenpox	1	25	62
Typhus fever	1	0	1
Mumps	12	40	57
Cancer	366	373	441
Pellagra	0	0	1
Pneumonia	77	197	147
Syphilis	125	84	163
Chancroid	1	1	7
Gonorrhea	414	265	296
Rabies—Human cases	0	0	0
Positive animal heads	15	14	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director
PROVISIONAL BIRTH AND DEATH STATISTICS
AND COMPARATIVE DATA, SEPTEMBER 1958

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During September 1958			Rates* (Annual Basis)		
	Total	White	Non-White	1958	1957	1956
Live births	7850	4926	2924	29.9	30.3	29.3
Deaths	2164	1352	812	8.2	8.7	8.1
Fetal deaths	150	58	92	18.8	20.0	19.1
Infant deaths—						
under one month	149	82	67	19.0	22.5	20.3
under one year	206	96	110	26.2	29.0	28.7
Causes of Death						
Tuberculosis, 001-019	39	20	19	14.9	9.6	7.3
Syphilis, 020-029	3	1	2	1.1	1.9	2.3
Dysentery, 045-048					1.2	0.8
Diphtheria, 055	1	1		0.4		
Whooping cough, 056						
Meningococcal infections, 057					1.2	
Poliomyelitis, 080, 081					0.8	
Measles, 085						0.4
Malignant neoplasms, 140-205	301	216	85	114.7	123.2	109.7
Diabetes mellitus, 260	35	21	14	13.3	8.9	10.0
Pellagra, 281	2	2		0.8	1.2	
Vascular lesions of central nervous system, 330-334	285	173	112	108.6	113.2	97.7
Rheumatic fever, 400-402	1	1		0.4	0.4	0.4
Diseases of the heart, 410-443	688	452	236	262.2	277.2	264.1
Hypertension with heart disease, 440-443	126	57	69	48.0	50.1	56.0
Diseases of the arteries, 450-456	42	27	15	16.0	12.7	15.4
Influenza, 480-483	3	2	1	1.1	2.7	0.8
Pneumonia, all forms, 490-493	42	23	19	16.0	20.8	22.0
Bronchitis, 500-502	3	1	2	1.1	1.2	1.2
Appendicitis, 550-553	1	1		0.4	1.9	0.8
Intestinal obstruction and hernia, 560, 561, 570	15	8	7	5.7	6.9	4.6
Gastro-enteritis and colitis, under 2, 571.0, 764	9		9	3.4	6.5	3.9
Cirrhosis of liver, 581	19	13	6	7.2	3.8	4.6
Diseases of pregnancy and childbirth, 640-689	7	4	3	8.8	7.5	7.8
Congenital malformations, 750-759	33	21	12	4.2	3.7	4.9
Immaturity at birth, 774-776	51	29	22	6.5	6.0	7.0
Accidents, total, 800-962	152	107	45	57.9	59.7	58.7
Motor vehicle accidents, 810-835, 960	80	64	16	30.5	32.3	32.4
All other defined causes	356	200	156	135.7	144.4	140.1
Ill-defined and unknown causes, 780-793, 795	76	29	47	29.0	37.7	26.3

Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.



BOOK REVIEWS

Chemistry and Biology of Mucopolysaccharides. Ciba Foundation Symposium. Edited by G. E. W. Wolstenholme, O. B. E., M. A., M. B., B. Ch., and Maeve O'Connor, B. A. Cloth. Price, \$8.50. Pp. 323, with 48 illustrations. Little, Brown and Co., Boston, 1958.

This is another fine Ciba Foundation symposium. There is a detailed discussion of the chemistry and biology of mucopolysaccharides of a wide variety of substances such as bacteria, connective tissue, and blood group specific substances, etc. The subject matter would be of primary interest to the biochemist or a clinician with a particular interest in this field. It is recommended for medical school libraries.

Walker B. Sorrell, M. D.

Physician's Handbook. By Marcus A. Krupp, M. D., Associate Clinical Professor of Medicine, Stanford Univ. School of Medicine, San Francisco; Director, Palo Alto Medical Research Foundation, Palo Alto; Norman J. Sweet, M. D., Associate Professor of Medicine, Univ. of California School of Medicine, San Francisco; Ernest Jawetz, Ph. D., M. D., Professor of Microbiology and Lecturer in Medicine and Pediatrics, Univ. of California School of Medicine, San Francisco; and Charles D. Armstrong, M. D., Assistant Clinical Professor of Medicine, Stanford University School of Medicine, San Francisco. Tenth edition. Fabricoid. Price, \$3.00. Pp. 500. Lange Medical Publications, Los Altos, California, 1958.

The tenth edition of *Physician's Handbook*, published by Lange Medical Publications, continues true to the tradition of the first publication by Drs. Warkentin and Lange in 1941. It continues to be an excellent, small, ready reference to many of the technical data which are so necessary to the practice of medicine in our present day technical world. Due to the concise and readily tabulated data, all of the procedures to which we subject our present day patients are clearly and concisely described. It is well-indexed. The handbook makes no pretense of being a textbook and as a handbook it is an invaluable adjunct to the library of every physician.

E. Fred Campbell, M. D.

The Cerebrospinal Fluid. Production, Circulation and Absorption. Ciba Foundation Symposium. Edited by G. E. W. Wolstenholme, O. B. E., M. A., M. B., B. Ch., and Cecilia M. O'Connor, B. Sc. Cloth. Price, \$9.00. Pp. 335, with 141 illustrations. Little, Brown and Co., Boston, 1958.

This is a Ciba Foundation symposium and, as usual, is an excellent discussion of the subject matter. There is a discussion of the anatomy and physiology of the meninges and choroid plexus of the brain, together with the production, circulation and absorption of the cerebrospinal fluid. This symposium would be of most benefit to anatomists and physiologists or a clinician

who had a particular interest in this field. It is recommended for medical school libraries.

Walker B. Sorrell, M. D.

Forensic Medicine. By Keith Simpson, M. D. (Lond.), Reader in Forensic Medicine to the University of London at Guy's Hospital. Cloth. Price, \$7.00. Pp. 352, illustrated. Edward Arnold, Ltd., London, 1958. The Williams and Wilkins Co., Baltimore, exclusive American distributors.

This is a concise and well written textbook rather generously illustrated.

Emphasis is chiefly upon investigative and gross post-mortem findings, with a fairly concise discussion of clinical toxicology. Analytical toxicology is virtually omitted, as is the treatment of practically all laboratory procedures. Being written from the standpoint of English law, the legal applications are rather limited for use in this country.

This is obviously not an advanced text but an elementary one designed to aid the practitioner where he may have occasion to assist law enforcement officers in cases of suspected violence.

In common with most English textbooks, it is extremely well written and concise, and makes interesting a subject not usually full of interest for the average clinician.

It is an excellent introduction to toxicology for the student, and for the practitioner with a moderate amount of interest in the subject. However, being based on British law, it is of little value to the American student for orientation in the legal routine for deaths, death certification, et cetera.

A well written text with much to offer in primer form for the clinician who finds himself required to do an autopsy or to work with police on cases of suspected violence.

C. J. Rehling, Ph. D.
Richard A. Harris, M. D.

ANNUAL SESSION
DINKLER TUTWILER HOTEL
BIRMINGHAM
APRIL 9, 10, 11, 1959

RULES LISTED FOR PROTECTING CHILDREN FROM SEX PERVERTS

Nearly all sex offenders have one characteristic—timidity—that furnishes the most promising way to protect children from them, according to an American Medical Association publication.

Because the sex criminal is usually timid, he will leave a child alone if he is resisted by the child at the outset of an encounter. Seldom will he pursue a girl or boy unless the child goes along with what is suggested.

Thus the child must be taught to resist firmly but politely all invitations from strangers, Beatrice Schapper, New York City, said in November's *Today's Health*.

Teaching children to avoid situations that play into the hands of sex perverts is "one of the most delicate jobs parents face. But if you remember that sex offenders are generally timid, the job becomes less difficult," the article said.

Most important is to make certain that children have a home where they feel loved, understood, and safe. Then they will come to their parents with anything out of the ordinary.

Children learn without harm other safety rules from their parents, and they can be taught to be cautious with strangers without being told all the horrible things that could happen.

For instance, a parent can combine admonitions such as "Look to the left and then to the right before starting across the street, and don't get in a car with a stranger."

The article listed some rules based on the recommendations of authorities and suggested that families work out their own list, expressing them in the youngster's own words. They are:

—Children should be told to report to parents, teachers, a policeman, storekeeper or other older persons any stranger who:

1. Asks a child to go anywhere with him—to a car, a private home, a movie, or for a walk. The child should say "no" politely and firmly.
2. Tries to talk with a child or touch him or his clothes in a theater. The child should tell an usher.
3. Tries to join children's games outside. Again, the man should be told "no" firmly but politely.
4. Offers candy or toys or a job with pay.

—Children should write down the license number of any stranger's car if the man invites them into the car. If they have no paper or pencil, the number can be scratched with a stick in the dirt or with a stone on the sidewalk.

—If children see the same man several times near the playground or along the street and he starts talking to them, they should tell him they want him to meet their teacher or parents. If he refuses, he should be reported.

—Children should be told not to play near public toilets, to stay with other children, to avoid playing in alleys or deserted buildings, and to take a pal along to the playground, church, movies, or store.

—Children should not go out alone late at night, not even in their own back yard.

—Any change in plans should be discussed with the parents over the telephone.

—Parents should never send a message via a stranger to a child at school or on a playground.

—If a driver attempts to push or pull a child into his car, the child should resist and run as fast as he can to the nearest store or house.

When a child has been involved in an unsavory incident, parents should never punish, shame, or frighten the child.

Miss Schapper said to parents: "Keep calm; don't jump to conclusions. By becoming upset, you may do the child more harm than the actual encounter. To react with disgust, fear, or hysteria may color permanently a child's attitude toward sex. . . . The child may need just to talk out his experience."

Specialists report that most incidents, when properly handled, tend to be forgotten in time.

MEDICAL SCHOOLS HAVE RECORD ENROLLMENT

American medical colleges had a record enrollment of 29,473 students in 1957-58.

Sixty of the 85 operating medical schools reported major construction, costing 47 million dollars, in the planning, beginning, or completion stages.

Forty-nine schools reported major developments and changes in administrative organization, methods of student selection, curriculum, and financing.

An estimated 275 million dollars was spent by the medical schools in 1957-58, an increase of 13 per cent over the preceding year.

These were among the many facts and figures in the 58th annual report on medical education by the American Medical Association's Council on Medical Education and Hospitals. The 90-page report appeared in the November 15 *Journal of the A. M. A.*

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

February 1959

No. 8

PROGRESS IN MEDICINE

PRESENT STATUS OF DRUG THERAPY IN RHEUMATOID ARTHRITIS

PART I

HOWARD L. HOLLEY, M. D., STEPHEN L. STIGLER, M. D.,
JOHN M. McMAHON, M. D.,
and
ROBERT S. HOGAN, M. D.
Birmingham, Alabama

Patients with rheumatoid arthritis are victims of a chronic disease state of unknown etiology. Likewise, there is no known specific cure; hence, the treatment may prove difficult and prolonged. There is no short cut to successful therapy; therefore, an exceptional amount of patience and understanding is required of both the patient and physician. At the time of institution of treatment it should be emphasized to the individual that there is no known cure for the disease and that he should not become discouraged if marked improvement is not forthcoming within the first few weeks of treatment. In many instances months or even years may elapse before any noteworthy degree of improvement becomes manifest. Response to therapy will be variable from week to week and minor setbacks will occur from time to time in most cases.

Individuals who are suffering with arthritis are often too willing to wait for the doctor to produce a cure without any effort on their part. An important consideration frequently overlooked is that it is most important to enlist the patient's own efforts to help himself. In this regard a well directed daily regimen of living should be recommended to the patient and reemphasized at each visit. This is to include proper exercises, balanced by adequate rest; variously applied home thera-

peutic measures; the selection of a properly balanced diet, and diversional activities. These will have to be modified from time to time, varying with the condition of the individual patient and the stage of the disease. In order that the full value of newer methods of treatment may be used to advantage, it should be explained that at regular intervals alterations in the therapeutic regimen may be required. Proper rapport with the patient is imperative in order to prevent his becoming discouraged before adequate therapeutic effects can be obtained.

Despite the advent of steroids and other drugs, certain basic fundamentals of therapy, such as physical therapy, rehabilitation and orthopedic procedures, remain of the utmost importance. However, the scope of this paper does not permit detailed discussion of these modalities.

Therapeutic claims of success have been extremely difficult to evaluate because of the character of the disease process. In the ordinary course of the disease, long periods of remission have been noted. Too frequently these have been judged to be the result of the treatment extant. Recently Steinbrocker et al. have attempted to establish standard criteria for evaluating therapeutic response.¹ The implementation of these criteria in reporting results of therapy should lead us to a more comprehensive evaluation of results of treatment.

DRUG THERAPY

At the present time no drug is known that will

This study was made possible by grants from the National Institute of Arthritis and Metabolic Diseases, NIH, USPHS; and the John R. Irby Fund for the study of arthritis.

From the Section on Rheumatic Diseases, Department of Medicine, Medical College of Alabama, and the Rheumatic Disease Clinic, University Hospital and Hillman Clinic, Birmingham, Alabama.

1. Steinbrocker, O.; Traeger, C. H., and Batterman, R. C.: Therapeutic Criteria in Rheumatoid Arthritis, J. A. M. A. 140: 659-662, June 25, 1949.

cure rheumatoid arthritis, and it should be emphasized that such therapy plays only an adjunctive, though important, role in its treatment. Therefore, the basic therapeutic regimen, so important to proper management, should not be neglected.

Probably the *salicylates* are the most important drugs available in the treatment of the disease. Their analgesic effect will often enable the patient to continue his routine duties. Aspirin is as good, and not as expensive, as many other salicylate preparations. Certainly a substantial number of patients will undergo remissions on salicylates and supportive measures alone. The dose should be 0.6 gram three or four times a day or more, although it should be remembered that there may be individual patient intolerance to the drug. The occurrence of tinnitus or nausea may presage the onset of salicylism and indicate that a reduction of the dosage is necessary. Occasionally, gastric disturbances with aspirin are such as to preclude the use of the drug in sufficient dosage to relieve pain. In such instances the drug may be combined with an insoluble alkali, though there is yet some dispute regarding the merits of such combinations. It is also available as an enteric coated tablet. Combinations of salicylates and steroids, of which there are many proprietary preparations, probably offer no advantage over each drug given separately. It is definitely agreed that supplementing almost any therapy of rheumatoid arthritis with salicylates is indicated; in the case of steroids the total daily dose can often be materially reduced with concomitant adequate salicylate therapy.

A recent report by British investigators has been of special interest to rheumatologists.² Observations were made on a small but carefully controlled series of patients with early rheumatoid arthritis who were treated with cortisone and aspirin. Evaluation at the end of a three-year interval revealed that there is little choice between cortisone and aspirin therapy in relieving symptoms, evoking remissions, and influencing the natural course of rheumatoid arthritis. The steroids, however, apparently had a slight salutary effect on the anemia of the disease.

CHRYSOTHERAPY

Most investigators now believe that gold has a distinct suppressive action on the pathologic-physiology of the rheumatoid state, though the mechanism is still not understood. It has been demonstrated that its salts possess a chemotherapeutic property against hemolytic streptococci and certain other pathogenic bacteria. After parenteral administration approximately 75 per cent of the

gold salts is retained in the body, while the remaining 25 per cent is excreted for the most part in the urine, with a small amount in the feces. The drug continues to be excreted for months after it has been administered. It is thought that the resultant accumulation of gold in the body may induce the toxic effects that sometimes occur in this type of therapy.

It is now generally accepted that the toxic results of chrysotherapy are directly related to the amount of the drug administered. Earlier, large single doses of 100 to 500 mg. were used, but Freyberg has shown that such amounts are not necessary to produce good clinical results and are more likely to produce toxic reactions.³ Presently gold therapy is instituted in smaller doses; 10 mg. intramuscularly for the first dose, 25 mg. a week later, and then 50 mg. at intervals of one week until a total of 1,000 to 1,500 mg. has been administered. Repeated courses of gold therapy have been advocated with intervals of from four to eight weeks between series. The rationale of such a regimen is to permit the body to excrete some of the accumulated gold salts, thus reducing the likelihood of toxic reactions. Chrysotherapy has been shown to be much more efficacious when administered early in the course of the disease.

A recent report advocates larger individual doses of gold; they evoke a prompter remission. To be sure, the possibility of toxicity for the drug is increased but the availability of BAL (British anti-lewisite) and cortisone renders such a reaction less hazardous.⁴ There is an apparent individual tolerance for the drug based primarily on the renal excretion rate. Identification of those patients who excrete the drug rapidly may render it possible to administer larger doses of gold without the appearance of toxic manifestations.

It has been estimated that about one out of every four patients on gold therapy exhibits a skin rash or some other toxic reaction. However, severe reactions are uncommon, constituting only about 3 per cent of the total. Fortunately, depression of the bone marrow with resultant agranulocytosis, thrombocytopenia, and aplastic anemia rarely occurs; however, stomatitis and nephritis do sometimes result from the use of gold therapy. To obviate these toxic reactions it is recommended that a blood count and urinalysis be made at least weekly or biweekly. The skin and mouth should be carefully observed on each visit for evidences

3. Freyberg, R. H.: The Present Status of Gold Therapy in Rheumatoid Arthritis, *Bull. Rheumat. Dis.* 7: 313 (1957).

4. Smith, Richard T.: Increasing Effectiveness of Gold Therapy in Rheumatoid Arthritis. Abstract. Ninth International Congress on Rheumatic Diseases, Toronto, Canada, 1957.

2. Joint Committee of the Medical Research Council: Ninth International Congress of Rheumatic Diseases, Toronto, Canada, 1957.

of dermatitis and stomatitis. In spite of such preventive measures a rare case of exfoliative dermatitis occurs. It is interesting to note that the disease in patients who experience such a reaction will frequently go into a long period of remission. BAL has been effective in the treatment of undesirable reactions from chrysotherapy.

It has been estimated that a large number (more than 40 per cent) of the cases of rheumatoid arthritis treated with gold relapse after cessation of the therapy. This incidence of relapse appears to be considerably reduced with maintenance therapy. Therefore, it is now recommended that therapy, usually consisting of 50 mg. of gold salts administered intramuscularly every 2 to 4 weeks, be continued indefinitely after the initial 1,000 to 1,500 mg. of the drug.

Reports have been made of the value of combined steroid and gold therapy. They are not mutually potentiating in antirheumatic effect, and the possibility of an exacerbation of the disease on discontinuing the steroid has to be considered, but small doses are often administered to tide the patient over until such time as the gold salts have become effective.

STEROID THERAPY

The remarkable antirheumatic effect of *cortisone*, as reported by Hench and co-workers in 1949, marks a milestone in the therapy of arthritis.⁵ This report opened new avenues of approach, both as to the etiology and treatment of this baffling disease. After administration of this drug, clinical response begins early, often dramatically, possibly within 12 to 24 hours, and is characterized by a rapid decrease in the subjective stiffness, diminution in articular tenderness, and decrease of pain on motion; mental depression gives way to euphoria. Improvement in the appetite results in improvement of the nutrition of the patient. If fever is present, it promptly abates.

There still remains some controversy as to whether an initial loading dose of cortisone (or other steroids as well) is advisable in the therapy of rheumatoid arthritis. Apparently the consensus now is that initially large, suppressive doses are not indicated. Likewise, the recommended total daily dosage presently approximates the estimated normal output of the adrenal glands, i. e., less than 10 mg. per day for children under 10 years of age; in adolescents, 10-20 mg.; premenopausal women, 30-37½ mg.; postmenopausal women, 25-30 mg.; and men, 37.5 to 50 mg. per day. Men, as a rule,

5. Hench, P. S.; Kendall, E. C.; Slocumb, C. H., and Polley, H. F.: Effect of Hormone of Adrenal Cortex (17-hydroxy-11-dehydrocorticosterone; compound E) and of Pituitary Adrenocorticotrophic Hormone in Rheumatoid Arthritis; Preliminary Report, Proc. Staff Meet., Mayo Clin. 24: 181-197, April 13, 1949.

tolerate cortisone better than women and can take somewhat larger doses.⁶

Corticotropin, because of the technical difficulty in administration, is rarely used in the long-term treatment of arthritis. There are two preparations available: the crystalline, which can be suspended in saline for intramuscular injection, and a gel-suspension. The crystalline material must be administered parenterally every 6-12 hours, whereas the gel suspension is much more slowly absorbed and reduces the number of injections to 1 to 2 every 24 hours. The usual initial dosage of corticotropin is approximately 40 units per day in divided doses. Some authorities recommend alternate doses of cortisone and corticotropin for physiologic reasons; in fact, although such a regimen has not experienced wide popularity, it appears to work very well in some individuals. Prolonged administration of corticotropin may evoke allergic manifestations to the drug. Likewise, antibody formation may substantially decrease its efficacy.⁷

The administration of 20 units of crystalline corticotropin in parenteral fluids in a slow intravenous drip daily over a period of 5 to 8 hours gives maximum stimulation to the adrenal cortex. This mode of therapy may be used as a temporary expedient when maximum effect is indicated.

From time to time unsubstantiated claims have been made that corticotropin is more effective than the adrenal steroids in this disease. Certainly an occasional patient will experience a prolonged remission after corticotropin therapy, but there is little evidence for its superior effectiveness.

A new prolonged acting corticotropin preparation has been reported in which zinc hydrochloride has been added.⁸ It maintains a maximum duration of action for 24 hours or longer. Exactly what place this new preparation will have in the therapy of rheumatoid arthritis remains to be determined. As with the other corticotropin preparations, the necessity of parenteral administration will certainly limit its general usefulness.

The use of nitrogen mustard, either alone or to supplement corticotropin therapy, has been advocated on the premise that the combination of drugs evokes a more prolonged remission of the disease.⁹

6. Holley, H. L.: Recent Advances in Steroid Therapy of Rheumatoid Arthritis, Mississippi Doctor 33: 257-259, Feb. 1956.

7. West, H. F.: Acquired Resistance to Corticotropins, Ann. Rheumat. Dis. 15: 124-133, June 1956.

8. Homan, J. D. H., and Others: Corticotrophin Zinc Phosphate and Hydroxide; Long-Acting Aqueous Preparations, Lancet 1: 541-543, March 13, 1954.

9. Scherbel, A. L.: A Rational Approach to the Treatment of Rheumatoid Arthritis. I. Intravenous Administration of Nitrogen Mustard Alone and with Corticotropin for Rheumatoid Arthritis, Cleveland Clin. Quart. 24: 71-76, April 1957.

One would question the advisability of the use of nitrogen mustard with its known toxic effect on the bone marrow until more evidence is presented to support the concept that clinical results are better with the combination than with corticotropin alone.

It is now generally recognized that *hydrocortisone* (not cortisone) is the principal glycogenic steroid produced normally by the adrenal glands. Its potency is approximately one and one-half times that of cortisone by weight. Therefore, smaller doses of hydrocortisone, as compared with those of cortisone, are needed for initiating and maintaining clinical improvement. There are also indications that some of the complications seen during cortisone therapy may be fewer and less pronounced after treatment with this drug.

Of even more importance is the demonstration by Hollander that hydrocortisone acetate when injected *intra-articularly* has pronounced local effect on the arthritic process.¹⁰ Unfortunately, the benefit is usually temporary, but this mode of therapy is a useful adjunct in the treatment of rheumatoid arthritis. The intra-articular dosage varies with the size of the joints: 37½ mg. for the hip joint, 25 mg. for the other larger joints, and 5 to 10 mg. for the phalangeal joints.

Hydrocortisone tertiary butyl acetate has been shown by Hollander to exert a more prolonged therapeutic effect than that of hydrocortisone acetate.¹¹ Prednisolone tertiary butyl furate* may be even superior to the hydrocortisone salts in evoking prolonged remission of the inflammatory reaction of the articular tissues.

The synthetic crystalline steroids, *prednisone* and *prednisolone*, are now well known for their use in the treatment of rheumatoid arthritis. Like cortisone, these steroids exert a suppressive but not curative influence on rheumatoid arthritis, with relapse soon following their withdrawal. There seems to be little or no difference in the physiologic activity of the two drugs. Their steroid activity measured by eosinopenic response is 3 to 4 times that of cortisone. The clinical improvement after smaller doses of therapy with these drugs is appreciably greater than that observed with cortisone. Although the effective dosage of these drugs, as with cortisone, may vary with the severity of the disease process, the usual

suppressing dose varies between 5 mg. to 30 mg. per day, administered orally in divided doses. As in other steroid therapy, the maintenance dose must be kept to the lowest possible level that affords the patient physical comfort, although the disappearance of objective signs of the disease is often difficult to evoke. Maintenance levels range from 2.5 to 15 mg. daily and should be reached by gradually decreasing the original dose. There is little or no difference between prednisone and prednisolone as to therapeutic effect and side reactions.

Long-term therapy with these drugs has not proven as innocuous as had been postulated. In a recent report on a series of 49 patients with rheumatoid arthritis treated with prednisone during the past three years, major side effects occurred in 23 patients, or nearly 50 per cent.¹² The most serious of these reactions consisted of peptic ulcer in 12 patients (24 per cent) and compression fractures in nine. Other complications of prednisone therapy included polyarteritis nodosa, fulminating infections, psychosis, and diabetes. Of the total of 49 patients, eight patients died during the three-year period. Five of these deaths could be attributed to therapy with prednisone.

Another new development in steroid therapy of rheumatoid arthritis was the introduction of prednisolone in which a methyl radical had been substituted at the sixth carbon atom, i. e., *6-methyl-prednisolone*.* After preliminary observations on laboratory animals, it has been estimated that this drug has an anti-inflammatory action at least one-third greater than that of prednisolone.¹³ The clinical results do not differ essentially from those obtained from the other predni-steroids. The sodium retaining and potassium wasting activity of the compound may be slightly less than that of prednisolone. It appears to be as potent as the other predni-steroids in promoting nitrogen wasting. The character and degree of improvement of rheumatic manifestations in patients resulting after the initial administration of 6-methyl-prednisolone do not differ significantly from those which would be anticipated from prednisone or prednisolone given in similar doses. Certainly, a long-term study will be necessary to assess the ability of the new compound to promote such complications as peptic ulcer or osteoporosis, so prevalent in prednisone and prednisolone therapy.

10. Hollander, J. L.; Brown, E. M., Jr.; Jessar, R. A., and Brown, C. Y.: Hydrocortisone and Cortisone Injected into Arthritic Joints; Comparative Effects of and Use of Hydrocortisone as Local Antiarthritic Agent, J. A. M. A. 147: 1629-1635, Dec. 22, 1951.

11. Hollander, J. L., and Others: Hydrocortisone Tertiary-Butylacetate by Intra-Articular Injection, J. A. M. A. 158: 476-477, June 11, 1955.

*Courtesy of Schering Corporation, Bloomfield, N. J.

12. Bunim, J. J.; Black, R. L., and Yielding, K. L.: Benefits and Hazards of Prednisone Therapy in Rheumatoid Arthritis. Abstract. Ninth International Congress on Rheumatic Diseases, Toronto, Canada, 1957.

13. Boland, E. W., and Liddle, G. W.: Metabolic and Antirheumatic Activities of 6-Methyl-Prednisolone (Medrol), Ann. Rheumat. Dis. 16: 297-306 (Sept.) 1957.

*Medrol—The Upjohn Company, Kalamazoo, Mich.

A still more recent synthetic steroid, 16-*alpha*-hydroxy-9-*alpha*-fluro, delta-1-hydrocortisone (triamcinolone),* has been investigated and preliminary reports were made at the interim session of the American Rheumatism Association at Bethesda, Maryland in 1956.¹⁴ These reports have suggested a possible tendency toward fewer undesirable digestive tract effects. However, triamcinolone produces side effects peculiar to it, namely, mental depression, headaches, drowsiness, dizziness, asthenia, weight loss, and perhaps hirsutism and purpura, as well as the usual untoward reactions of the other steroids. Excessive urinary sodium wastage may be present. This steroid may be especially effective in the psoriatic component of psoriatic arthritis.

Since January 1958 a new synthetic steroid, Dexamethasone,** has been subjected to evaluation in studies with patients having rheumatoid arthritis.¹⁵ Dosage comparison studies made in a series of patients reveal that its average antirheumatic potency per milligram is about 6 to 10 times greater than that of prednisolone. The daily dosage schedule ranges from 0.6 to 2.6 mg. Metabolic studies to date have revealed no retention of sodium or water or any loss of potassium. Here again, these are preliminary reports, and little can be said concerning the relative frequency or severity of undesirable side effects with prolonged use.

Indications for Steroid Therapy: It is becoming increasingly evident that mild cases of rheumatoid arthritis will respond to salicylates, rest and physiotherapy, whereas many others will experience fairly prompt remission after chrysotherapy. None of the steroids cure rheumatoid arthritis, and the value of these agents is transitory; their effects last only as long as they are administered. These steroids do not repair damaged tissue, and it is futile to give them to a patient with deformed, ankylosed joints. Therefore, the physician should employ steroid therapy with reluctance, realizing that once initiated the patient will usually wish to continue it indefinitely. Likewise, the frequency of severe exacerbations of the disease after discontinuance of the drug, and the tendency toward relative refractiveness to the therapy after prolonged administration, must also

be carefully considered. These hormones, though, are of value in the acute, inflammatory, progressive form of the disease, especially if other forms of treatment have proven futile. Also, the improvement evoked by small amounts of the drug may be of great value to some of the patients in the chronic stage of the disease since they are able to continue their work or undertake more definitive physiotherapy. These drugs may be highly useful agents in selected cases, especially in those in which there is insufficient response to more conservative measures, and in those of progressively unremitting nature.

A large percentage of patients treated with these drugs suffer undesirable side effects severe enough to cause discontinuance of the drug. Likewise, some experience insufficient relief to warrant their further use. Recently, investigators have estimated that not over 24 to 35 per cent of patients can be maintained in satisfactory remission with the drugs for two years or more. Ironically, each year the number of patients reported experiencing satisfactory therapeutic results from these drugs appears to decrease, regardless of the excessive current demand for their use in therapy of rheumatoid arthritis.^{16,17}

It is now recognized that steroid therapy frequently fails to arrest the inflammatory process associated with the disease.¹⁸ In fact, serial x-ray examinations may reveal progression of the joint lesions even though symptomatic improvement continues. Evidence of disease progression occurs in more than one-half of the patients under apparently adequate treatment. Frequently, the erythrocyte sedimentation rate remains elevated or rises even under supposedly suppressive doses of the drugs. The degree of inflammation in synovial membranes, subcutaneous nodules, lymph nodes and vascular endothelium has been shown by serial biopsies to diminish after administration of these drugs, but the histologic changes do not disappear, even after months of therapy. It is apparent that these drugs induce little or no modification of the basic pathologic abnormalities of the disease.

Contraindications to Steroid Therapy: Patients with cardiac decompensation, advanced cardiovascular disease, severe vascular hypertension, osteoporosis, severe diabetes mellitus, active tubercu-

14. Hellman, L.; Zumoff, B.; Schwartz, M. K.; Gallagher, T. F.; Berntsen, C. A., and Freyberg, R. H.: Interim Session, Am. Rheumat. Assn., Bethesda, 1956.

15. Bunim, J. J.; Black, R. L.; Lutwak, L.; Peterson, R. E., and Whedon, G. D.: Studies on Dexamethasone, a New Synthetic Steroid, in Rheumatoid Arthritis. A Preliminary Report, *Arthritis and Rheumatism* 1: 313-331, August 1958.

*Aristocort—Lederle Laboratories Div., American Cyanamid Co., Pearl River, N. Y.

Kenacort—Squibb & Sons, New York, N. Y.

**Decadron—Merck Sharp & Dohme, Philadelphia 1, Pa.

16. Kammerer, W. H., and Cecil, R. L.: Cortisone in Private Practice. Eighth International Congress on Rheumatic Diseases, Geneva, Aug. 24-28, 1953.

17. Robinson, W. D.: The Present Day Treatment of Rheumatoid Arthritis, *Postgrad. Med.* 14: 206-213, Sept. 1953.

18. Howell, D. S., and Ragan, C.: The Course of Rheumatoid Arthritis During Four Years of Induced Hyperadrenalism (IHA), *Medicine* 35: 83-119, May 1956.

losis and other infectious diseases should not receive these drugs. Likewise, an active peptic ulcer, or even a history of peptic ulcer, with frequent exacerbations of symptoms, is considered a contraindication to steroid therapy. Individuals with various mental disturbances, especially the schizophrenic type, should not receive these drugs.

Undesirable Physiologic Effects of Steroid Therapy: With the administration of an exogenous steroid, such as cortisone or its analogues, suppression or even atrophy of the adrenal cortex may occur. The onset of an infectious process, a surgical procedure, or accidental trauma in a patient receiving these drugs may precipitate serious *adrenal cortical failure*.

Mental aberrations may occur, with occasional suicidal tendencies. Progressive *hirsutism* is not uncommon. *Edema* and the *Cushingoid* appearance, i. e., the moon face, buffalo hump, and acne may appear, especially after prolonged use of large doses of these drugs. The rapid depletion of the body stores of *potassium* that occurs after the administration of cortisone or hydrocortisone may prove serious. The loss of potassium in the urine is directly associated with the amount of the drug administered. The use of dietary salt restriction measures and administration of potassium supplements will obviate such a depletion syndrome. Potassium depletion may precipitate *cardiac arrhythmias*, congestive failure, renal tubular disease, and early evidence of intoxication in patients receiving digitalis preparations. The newer synthetic steroids show less proclivity to potassium excretion. *Triamcinolone* may cause excess renal loss of sodium with little or no effect on the potassium excretion.

Patients undergoing surgery who are under therapy with these drugs may show *impaired wound healing*. This phenomenon is for the most part relative and may be merely a delayed effect because eventually all the wounds heal. This has been shown to be due to the inhibition of fibrous tissue production. Likewise, *delayed callus formation* may result in non-healing of bone fractures. *Peptic ulcerations* or exacerbations and even rupture may occur. The lack of symptoms of such a catastrophe may result in delayed institution of remedial therapy. The induction of an anti-ulcer regimen is advisable in any patient taking steroids who has a history of peptic ulcer or repeated digestive complaints. This is not always attended with success, of course. There are several combinations of predni-steroids with antacids available; their efficacy is still unknown. A gastrointestinal x-ray series should be done on patients under steroid treatment with persistent epigastric distress. The patient with a known peptic ulcer and who is a rheumatoid cripple when denied

steroids often presents a difficult problem. *Osteoporosis* and pathologic fracture of the spine are manifestations of the negative nitrogen balance and usually occur after long-term therapy. Interference with *antibody production* or activity may result in overwhelming intercurrent infections. The reactivation of a latent tuberculosis infection is now being observed with increasing frequency.

An *arteritis* has been observed occurring in patients under long-term therapy with these drugs.¹⁹ Similarly, involvement of the renal vessels could conceivably precipitate a malignant hypertensive syndrome.

Hypercortisonism: Slocumb has described a syndrome consisting of excessive fatigability, emotional instability, and weakness, with diffuse arthralgia in the muscles and joints, which he considered to be secondary to prolonged over-dosage of cortisone.²⁰ The so-called pseudo-rheumatism of hypercortisonism is said to resemble that of psychogenic rheumatism rather than that of exacerbation of the rheumatoid arthritis, i. e., it is not characterized by morning stiffness and does not respond to heat and salicylates. The onset of such symptoms is indicative that a gradual reduction of the dosage of cortisone be instituted.

(To be concluded)

Nasal Surgery in Childhood Should Be Kept to Minimum—Nose surgery before a child is 14 should be kept to an absolute minimum, according to two Eastern otolaryngologists.

Surgery to correct nasal deviations should be delayed whenever possible until the nose has reached its full growth between the ages of 14 and 17, the doctors said in the December Archives of Otolaryngology, published by the American Medical Association.

Surgery in the early years may interfere with the nose's growth and result in further deviation. Surgery should be performed only in situations where the deviation interferes with the passage of air.

The doctors also reported a new operation for repairing the bone that divides the nose into two chambers. It is better, they said, to make several small vertical incisions near any buckled area of cartilage than to make one long incision.

This is recommended so that only a minimum of cartilage will be removed and that only a minimum of interference with the nutrition of the remaining cartilage will occur.

The authors are Dr. Joseph G. Gilbert, Roslyn Heights, N. Y., and Dr. Samuel Segal, Jr., Springfield, Mass.

19. Kemper, J. W.; Baggenstoss, A. H., and Slocumb, C. H.: The Relationship of Therapy with Cortisone to the Incidence of Vascular Lesions in Rheumatoid Arthritis, *Ann. Int. Med.* 46: 831, May 1957.

20. Slocumb, C. H.; Polley, H. F., and Ward, L. E.: Diagnosis, Treatment and Prevention of Hypercortisonism in Patients with Rheumatoid Arthritis, *Proc. Staff Meet., Mayo Clinic* 32: 227-238, May 1, 1957.

POST-EMETIC RUPTURE OF THE ESOPHAGUS

T. BRANNON HUBBARD, JR., M. D.

Montgomery, Alabama

INTRODUCTION

The purpose of this paper is to emphasize the fact that the normal, apparently healthy esophagus can rupture during the act of vomiting, and that this syndrome constitutes a surgical emergency that should always be kept in mind when a patient complains of the sudden onset of severe epigastric or left chest pain.

Until 1947 approximately 50 such cases had been recorded in the literature. All terminated in death. None had been operated upon definitively because the diagnosis was rarely made before death. Since 1947 approximately 50 cases have been reported in which the diagnosis was made promptly and successful operation carried out. Undoubtedly other cases have been salvaged and not described in the literature. Indeed, one might wonder at the indications for another case report since the surgeon interested in surgery of the esophagus and stomach has found his specialty journals replete with discussions of this subject over the past 10 years. However, following the occurrence of the case to be presented in this paper, I was impressed with how unknown this clinical picture is to the doctor whose primary field is not gastro-intestinal or chest surgery. Since early diagnosis is so essential for successful treatment, it was felt that this case report might not be out of place, for certainly a diagnosis cannot be made unless the possibility is kept in mind.

HISTORICAL NOTE

In 1723 the surgeon, Boerhaave, treated the Grand Admiral of Holland during the latter's fatal illness. Boerhaave's description of the case was published the next year. It was the first known report of a spontaneous rupture of the esophagus.¹ No better description of the onset and termination of an untreated case has ever been made. The following is Mackenzie's abstract of Boerhaave's original work, which I have taken the liberty of copying from an article by Barrett published in 1946.²

ABSTRACT BY MACKENZIE OF THE CASE OF RUPTURE OF THE OESOPHAGUS OBSERVED BY BOERHAAVE

(The original occupies seventy closely printed pages)

The subject of this accident was Baron de Wassenauer, a man over fifty years of age, and of powerful frame, whose appearance betokened perfect health. In his youth

1. Boerhaave, H.: *Atrocis, nec descripti prius, Morbi Historia, Secundem Artis Leges Conscripta*, Ludg., Batav., 1724.

2. Barrett, N. R.: *Spontaneous Perforation of the Esophagus*, *Thorax* 1: 48-70, 1946.

From the Department of Surgery, St. Margaret's Hospital, Montgomery, Alabama.

he had frequently suffered from "angina," and for many years during the winter he had been subject to gout, attributed by himself to overeating and want of exercise. After a full meal he always felt a sensation of great weight at the pit of the stomach, and to relieve this he was in the habit of taking ipecacuanha in a copious infusion of blessed-thistle (*caruus* or *onicus benedictus*). This herb was once much used as a febrifuge and tonic, and as a mild diaphoretic. The infusion is said to induce vomiting or rather to assist the action of emetics, but probably it has much the same effect as warm water), though he sometimes used the latter beverage alone.

At the time of the accident which caused his death, Baron de Wassenauer was atoning by low diet for an excess at table committed three days before, and a glance at his last meal—an early dinner—may give some idea of the character and amount of his food when he was not stinting his appetite. It has long been supposed that the Baron was a gross feeder, but after a careful perusal of the case, so eminent an authority as Prof. von Ziemssen does not think this opinion warranted by the facts. An examination of the following list, which does not represent the bill of fare, but only that portion of it which was partaken of by the Baron, will enable the reader to determine for himself a matter which has an important aetiological bearing on the case:

Dinner

Veal Soup, with Herbs
Boiled Lamb and Cabbage
Fried Sweetbread and Spinach
Duck
Two Larks
Compote of Apples
Dessert
Pears, Grapes, Sweetmeats

Beer and Moselle

In justice to Baron de Wassenauer it must be stated that he does not seem to have eaten largely of any of these viands, except perhaps of the duck, of which he took a leg and breast. In the afternoon he went out riding, and returned in his usual health. No supper was taken, but about half past ten in the evening he began to complain of the old disagreeable feeling about the stomach, and he swallowed three tumblerfuls of a hot infusion of thistle. As this did not act with its usual efficacy, he took four more glasses of the same infusion, but still without effect. Much surprised at this, the Baron ordered another dose to be prepared, and in the meantime strove to excite vomiting by tickling his fauces. Whilst straining violently he suddenly felt a horrible pain, and gave such a cry of anguish that his servants hastened to his assistance. He exclaimed that something had burst or been violently displaced near the pit of the stomach, and that he was sure he must die immediately. He was put to bed in a state of utter prostration, being pale, bathed in cold sweat and pulseless. Half an hour after the seizure he swallowed four ounces of olive oil, and with the help of his finger succeeded in vomiting some of the oil together with a certain quantity of the thistle-infusion. Two ounces more of olive oil, however, produced neither nausea nor vomiting, and the pain increased. Shortly afterwards the Baron drank about six ounces of warm spruce-beer.

On his arrival Boerhaave found the Baron sitting in bed, with his body bent forwards almost double. Three servants supported him in this attitude, as every other posture, especially sitting or standing upright, caused excruciating agony. On examining his patient, Boerhaave found that there was nothing to be seen in the throat; there was no nausea; scarcely any eructation, the breath was not offensive, there was neither pain nor difficulty in swallowing, there was no thirst, and the feeling of weight about the stomach was no longer present.

No swelling or hardness could be detected in the chest or abdomen. The urine was natural, and could be passed without difficulty. The patient's body seemed to be of normal temperature, the pulse quick and full, but regular, the breathing and sound of the voice natural. There was frequent deep sighing, but no cough. The colour of the Baron's face was natural, his mind was quite clear, and there was no paralysis. In short, the only sign of disease was the agonizing pain felt by the patient, and an indefinable sense of some change in the situation of parts within the chest. The pain was situated at first in the epigastric region and was described by the patient himself as a feeling of some sensitive membrane having been torn; it never ceased, and hardly abated for an instant. Later on, the pain, without leaving its original seat, extended backwards, then along the sides, and finally over the whole inner wall of the chest. The patient stated that flatulence caused extreme suffering, the gas apparently not finding its way up; he could feel it leave the stomach, and then almost immediately experienced an excruciating pain in the chest. The physician in vain sought for a satisfactory explanation of the phenomena, the possibilities of "internal inflammation," thoracic tumor, displacement of parts, poison, and gout being successively considered and dismissed.

Boerhaave was inclined to give a hopeful prognosis from the absence of any symptom of disease except pain, which, in spite of its atrocious severity, he did not think would be sufficient to cause death. With the view of diminishing his agony the patient was bled almost to syncope, but this measure failed to give the slightest relief. Poultices, applied near the stomach, made his sufferings worse. Anodyne draughts were administered, but the use of narcotics was avoided, as tending to lessen excretion. The bowels were emptied by enemata. The voiding of urine was diminished to a few drops, passed with great straining and a sensation of scalding. The urine was thick, red, and strong-smelling, these characters proving to Boerhaave's mind that none of the abundant quantity of fluid which the Baron had swallowed could have reached the kidneys. The heart now (sixteen and a half hours after the seizure) began to fail, the face grew pale, the extremities cold, the breathing became hurried, and though the patient's mind continued clear, death seemed imminent from mere exhaustion. As a last resource, thinking that possibly the cardiac orifice of the stomach was obstructed by undigested food, Boerhaave ordered two ounces of sweet almond oil, to be followed by seven ounces of warm water, and directed that the action of the remedy should be assisted by tickling the fauces with a feather dipped in oil. As the result of this, a little liquid was thrown up, but none of the oil returned, and no relief was obtained. Here it may be mentioned that there had been no hiccup during the whole course of the affection. Boerhaave was still inclined to believe that the upper orifice of the stomach was blocked up; on reckoning up the large quantity of drink taken by the patient and the small amount vomited up or passed as urine, it seemed clear that the fluid could not have

reached the stomach. A swelling was now observed in the epigastrium, which seemed to confirm this view. Shortly after the administration of the last emetic, eighteen and a half hours after the beginning of his cruel suffering, the Baron showed signs of collapse, and, rather to the surprise of his physician, suddenly expired.

Autopsy twenty-four hours after death.—A large livid stain was seen on each side of the thorax, with black patches here and there. There was emphysema all over the front and sides of the chest. The abdomen was inflated and extremely tense. On opening it, the peritoneum, intestines and stomach were all found enormously distended with air, but, to Boerhaave's extreme amazement, the latter viscus contained only a few drops of reddish-brown fluid. The bladder was empty and contracted. On opening the chest cavity Boerhaave, who at the time knew nothing of the nature of the patient's last meal, remarked a strong smell of roast duck. The pleural sacs were found distended with gas, the lungs collapsed and almost bloodless. In each side of the chest there was a large quantity of fluid resembling that previously seen in the stomach, mixed with some of the thistle-infusion. Floating on this was the almond oil ordered by Boerhaave, but, on careful examination, not a drop of blood or pus could be seen. The fluid collected from both sides of the chest measured 104 oz. (Amsterdam measure). On the part of the pleura covering the left side of the oesophagus, at a distance of two inches from the diaphragm, there was a discoloured patch about three inches in diameter, in the middle of which a fissure was perceived half an inch in length, and three lines in breadth. The fissure was found to communicate with a space in the mediastinum, from which the retracted ends of the ruptured oesophagus had been drawn asunder in opposite directions. The most minute inspection failed to show the least sign of ulcer or other disease in the oesophagus; Boerhaave emphatically states that, though he searched in the expectation of finding some pre-existing lesion of the gullet-walls to explain so unprecedented an accident, the more he looked at the edges of the rent and the surface of the oesophagus near them, the more perfectly healthy they seemed to be. The stomach was also quite free from disease.

THE CLINICAL PICTURE

The Admiral's last illness is so typical of the numerous cases that have been reported in the ensuing 230 years that the pertinent points of the clinical picture may almost be enumerated from this case alone.

(a) The patient is usually a male and usually between forty and seventy years old.

(b) The rupture of the esophagus typically occurs when vomiting after a relatively large intake of food and usually drink.

(c) The immediate symptom is severe pain in the epigastrium, left chest, or substernal area. The pain is usually so severe that no narcotics will relieve it.

(d) The clinical signs consist of shock, a rapid pulse, varying degrees of cyanosis, a labored respiration, and a board-like epigastrium.

(e) If the mediastinal pleura remains intact, mediastinal emphysema is often a prominent part of the picture, progressing in a short time to subcutaneous emphysema in the base of the neck.

(f) If the mediastinal pleura is eroded by the gastric juice or split by the mediastinal pressure, the pleural cavity contains air and gastric juice. This effusion usually occurs on the left side, but may occur only on the right, or on both sides.

(g) If definitive surgery is not performed within 24 hours, all patients, with very rare exceptions, die.

(h) Anatomically, the esophagus is torn, almost without exception, in a linear fashion on the left postero-lateral wall just above the diaphragm. The reason for the consistent location and longitudinal character of the tear is not fully understood, but the kinetics of this phenomenon have been confirmed in the experimental rupture of the esophagus of cadavers by air pressure, the rupture almost invariably occurring in this location.³ The above-described case of Boerhaave is one of the two cases in which a complete transverse tear has been reported. Although it is the purpose of this paper to emphasize the occurrence of esophageal rupture after vomiting, similar ruptures have occurred after straining at stool, during childbirth, or from a forceful blow to the abdomen. These cases have all presented the same longitudinal tear on the left postero-lateral wall in the distal third of the esophagus.

CASE REPORT

This 62-year-old healthy white man went out to dinner on the evening of July 11, 1958. His menu, though not as exotic as the Admiral of Holland's, rivalled his in size. It consisted of approximately six ounces of Scotch whiskey, followed first by a large salad bowl containing lettuce, tomato, peppers, cheese, olives, shrimp, hard-boiled egg, anchovies, celery, olive oil, and vinegar. This was followed by a whole broiled pompano. With this meal, crackers, butter, and three garlic rolls were absorbed. The meal was finished about 9 p. m. At 1 a. m. he was awakened with nausea and this was followed in a few minutes by violent vomiting. During or immediately after the vomiting, there was a sudden onset of severe pain in the left chest and epigastrium. The vomitus toward the end contained blood.

He was admitted to St. Margaret's Hospital at 2:30 a. m. On admission his temperature was 101° F, pulse 120, respirations 30, blood pressure 120/80. He was pale and clammy with a board-like epigastrium. White blood count was 13,800; hematocrit was 46 per cent. X-ray of the chest taken at 4 a. m. was essentially negative except for slight blunting of the left costophrenic angle; there was no definite fluid in the chest and no mediastinal emphysema. X-rays of the abdomen were negative

(Fig. 1). The diagnoses considered at this time were coronary occlusion, acute pancreatitis, perforated peptic ulcer, and hiatus hernia.

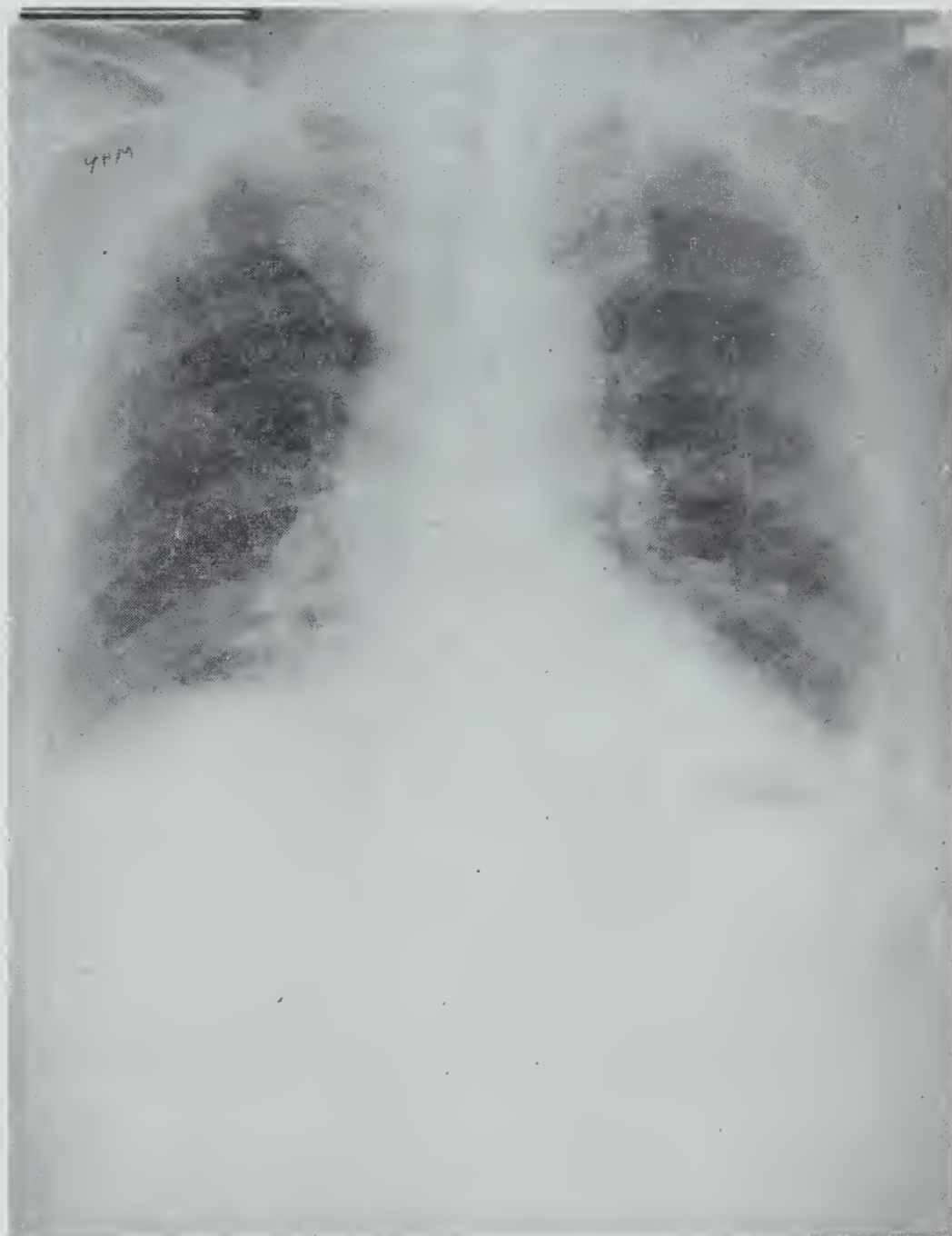


Fig. 1. Portable x-ray of chest taken at 4 a. m. No definite fluid can be seen even on careful reevaluation. There is no mediastinal emphysema.

Over the next four hours his condition continued to deteriorate and his pain persisted in spite of massive narcotic administration. At 8 a. m. another portable x-ray was made of the chest and at this time there was fluid in the left chest. There was still no visible mediastinal or subcutaneous emphysema (Fig. 2). There was at this time, however, a positive Hamman's sign. The left chest was aspirated and grey, cloudy fluid was returned. No attempt was made to test it for acid since the diagnosis was apparent.

Operation was performed at 11:30 a. m., approximately 10 hours after onset of pain. A left thoracotomy was done. The pleural cavity contained about two liters of grey, cloudy fluid. The mediastinal pleura overlying the distal half of the esophagus was grey and necrotic and presented a tear measuring 5.0 cm. in length. Opposite this was a linear, longitudinal tear in the lateral wall of the esophagus, measuring 5.0 cm. in length. The mucous membrane of the esophagus was inspected and no other abnormality was seen. The pleural cavity was washed out thoroughly; the mediastinal pleura was incised widely to afford adequate

3. Derbes, V. J., and Mitchell, R. E., Jr.: Rupture of the Esophagus, *Surgery* 39: 688-709 and 865-888, 1956.



Fig. 2. Portable x-ray of chest taken at 8 a. m. There has been a rapid accumulation of fluid in the left chest. There is still no apparent emphysema.

drainage; and the esophageal tear was repaired. The chest was then closed with catheter drainage.

When the operation was started, this patient appeared to be *in extremis*. His systolic blood pressure was 70 millimeters of mercury, pulse 130 per minute. As soon as the chest was opened and the gastric contents evacuated, his condition improved remarkably. Blood pressure rose to 110 millimeters, and his pulse decreased to 120 per minute. This immediate improvement upon opening the chest is characteristic of such cases and an apparently moribund condition should not be a contraindication to surgery, since in surgery lies the only hope of salvage.

The immediate postoperative course was uneventful and liquids were allowed by mouth on the eighth postoperative day. Thereafter, however, his course was complicated by fever and a leucocytosis of 20 to 25 thousand, with a rather marked eosinophilia up to 29 per cent. Thorough study of the abdomen, chest, mediastinum, and intestinal tract never revealed the cause for this, though a mediastinal plegmon remained the best bet. The patient was discharged from the hospital on August 12, 1958, one month after admission. His leucocytosis persisted, though his fever had abated. Two months postoperatively, he was asymptomatic with a normal blood count.

DISCUSSION

As may be seen from the above, the diagnosis of a ruptured esophagus is easily made if the possibility is kept in mind. The tentative diagnosis has often been made over the telephone, and in this case was made before seeing the patient. The diagnosis can be confirmed by demonstrating subcutaneous emphysema, by aspirating gastric juice from the chest, or by having the patient swallow radiopaque dye and demonstrating its extravasation into the chest or mediastinum.

I would like to emphasize the fact that, though rupture of the esophagus is relatively rare, it should be kept in mind and always considered in the differential diagnosis of perforated ulcer, coronary occlusion, dissecting aortic aneurysm, and other causes of sudden, severe epigastric and chest pain. When it is considered as a possibility, the importance of repeated x-rays of the chest, when the first film is not diagnostic, becomes apparent, as in the case reported here. Many cases, terminating fatally, have been diagnosed as a perforated ulcer and explored abdominally. Others have undoubtedly been allowed to lie in bed, diagnosed as a coronary occlusion or dissecting aneurysm, without repeated examinations; for, as in the case reported here, an early x-ray of the chest may show no effusion or air, but a later film may be diagnostic. An even prompt diagnosis can be made, of course, when the mediastinal pleura is still intact, by having the patient swallow an innocuous radiopaque dye (e. g., Gastrografin) and demonstrating its extravasation into the mediastinum.

SUMMARY

The normal, healthy esophagus may be ruptured by the act of vomiting. The essential characteristics of the clinical picture have been described and the necessity for early operative repair emphasized. A typical case, its diagnosis and treatment, has been presented.

What is the outlook for epilepsy? Approximately 23 per cent of all epileptic patients have spontaneous remissions lasting for from one to five years, and an additional 6 per cent have remissions lasting for more than 5 years, according to the current issue of *Patterns of Disease*, prepared by Parke, Davis and Company for the medical profession.

The possibility of spontaneous or therapeutically induced remissions is good if the patient has had only a few seizures, if seizures began after childhood, or if no gross brain injury is present. Seizures may return, however, in cases of spontaneous remission after 10 to 20 years, and in therapeutic remissions of 3 to 5 years duration if treatment is stopped.

Most epileptics do not die of epilepsy and those who do, die young, *Patterns* also reports. Only 2,143 deaths were ascribed to epilepsy in 1955—a death rate of 1.3 per 100,000 population.

SPONTANEOUS RUPTURE OF THE SMALL BOWEL

S. W. WINDHAM, M. D.

Dothan, Alabama

Rupture of an intra-abdominal hollow viscus is not too unusual in any hospital where considerable traumatic work is performed. Spontaneous rupture of the small bowel with no demonstrable precipitating factor is unusual. Mason⁶ reported four such cases from an active surgical service, and from review of the literature could collect only 50 cases prior to his report. This group of cases excludes rupture of the small bowel as seen in infants. The condition seems to be more prevalent in infants than in adults. Abt,¹ from a review of the literature, reported 64 cases in children up to 1924. Reports of 39 cases were compiled by Thelander¹⁰ and Russell⁹ in 1939 and 1940. Inspissated and impacted meconium contributes most of the cases in the newborn. With these conditions not operating, spontaneous rupture of the small bowel becomes a rare condition.

The following diseases are frequently associated with rupture of the small bowel:

1. Typhoid fever,
2. Regional ileitis,
3. Diverticulitis of the small bowel,
4. Meckel's diverticulum,
5. Long standing small bowel obstruction,
6. Strangulated obstruction,
7. Trauma,
8. Necrotizing jejunitis,⁵ and
9. Lymphosarcoma.

In the cases being presented, none of these factors was operating.

One of the early collected series of cases of spontaneous rupture of the small bowel was reported by Wilensky and Kaufman¹¹ in 1937. This consisted of 43 cases. Since then Aird,² Robinson,⁸ MacMillan,⁷ Berman and Rosner,³ Christopher,⁴ and Mason⁶ have added individual experiences and/or collected series from the literature. Most have attributed this condition to sudden muscular effort, and in most cases some preexisting pathologic condition was found present. No such conditions were present in my cases. Hernia has been present in 48 cases of the 54 reported in the literature (Mason).⁶ Neither of my cases had hernia. Fifty-three of previously reported cases were in males. This report adds another female to the group. The age incidence is that of middle age, whereas one of my cases was that of a 14-year-old female. Physical exertion was not a noticeable factor in either of the cases being reported.

The history usually reveals the following: The patient had been in good health and suddenly begins having severe abdominal pain. Neither of the cases presented had anything like the pain of a perforated duodenal ulcer or other tremendous intra-abdominal insult. Both began with low grade to moderate lower abdominal pain. This was followed by nausea, vomiting, and a continuation of and an increasing abdominal discomfort. In one a low grade fever was present, whereas the other had very high fever. In the former, the disease was only twelve to fifteen hours old, whereas in the latter the illness had been present for seven days. Both had signs of peritonitis with abdominal wall rigidity and rebound tenderness. No masses could be felt in either and hernia was not present in either. Both presented themselves with signs and symptoms of an acute abdominal condition but without any definite characteristic symptomatology or set of physical findings. In that their findings were more pronounced in the lower abdomen, both were operated upon with a preoperative diagnosis of acute appendicitis complicated by perforation and spreading peritonitis.

The treatment of this condition is surgical but only after the patient is made safe for surgery. The outcome in the 14-year-old female graphically demonstrates why this statement is made. A perfectly satisfactory surgical procedure had been performed, but as the skin was being closed she expired. On admission she was critically ill and had been for six or seven days before admission. Without adequate fluid and electrolyte replacement and preoperative tube decompression of at least the upper gastro-intestinal tract, the operation was performed. The result was disaster. I emphasize again that the patient must be made ready for surgery. With fluids, suction, antibiotics, and corticoids, this can be done. In both cases the perforation was on the antimesenteric border of the bowel and transverse suture was easily accomplished. Extensive peritonitis was present in both cases. The intra-abdominal fluid was aspirated, the abdominal cavity irrigated with saline, and aureomycin was placed in the abdomen. In the one surviving patient, antibiotics, suction, and proper attention to fluid and electrolyte therapy were continued in the postoperative period. His recovery was uneventful. One month later a gastro-intestinal study, including the small bowel, was made and no abnormality could be detected.

Sections of the wall of the ileum at the site of rupture were taken in both cases. The pathologic report in both was that of a nonspecific acute in-

From Surgical Services, Southeast Alabama General Hospital and Flowers Hospital, Dothan, Alabama.

flammatory lesion. At surgery no noticeable lymph node enlargement was present and no intra-abdominal adhesions or other signs of previous disease were noted. Trophic changes in the bowel wall, embolism resulting in gangrene, and perforation have been theoretically accused. Nothing suggesting either type change was present in either of my cases.

The mortality rate in my two cases was 50%. The time interval between onset of disease and operation should, as in surgery for perforated duodenum, govern the mortality rate. With present day antibiotics, proper fluid and electrolyte therapy, and surgery within a reasonable time following perforation, most all should be salvaged.

REPORT OF CASES

Case 1.—R. B. R., a 41-year-old colored male, was admitted to the hospital with acute abdominal pain beginning 16 hours before hospital admission. The pain was localized across the lower part of his abdomen. It was sudden in onset, associated with nausea, and he had vomited several times. With the onset of the pain and nausea, he took a laxative with no results and about four hours later he was given an enema which resulted in a normal bowel movement. Approximately six days prior to admission he had been struck in the abdomen by a "piece of lumber" and had a small amount of abdominal discomfort since that time. He had no fever, change in bowel habits, or other complaints during the six-day period since the abdominal accident. About two weeks prior to the onset of his present illness, he had "flu" and had been under the care of a physician for this disease.

His past history revealed no gastro-intestinal complaints prior to the onset of his present illness.

Physical examination disclosed a well developed, slightly obese, middle aged, colored male perspiring profusely, moderately dehydrated, and a temperature of 102.4° F, a pulse rate of 120, and a respiratory rate of 22. His abdomen was moderately distended and extremely tender throughout but with more severe tenderness in the right lower abdomen. Rebound tenderness was present throughout. No masses of palpable viscera were present. No hernia was present.

The erythrocyte count was 4,250,000, and the leukocyte count 18,600, with a shift to the left in the differential. The urine was normal.

A diagnosis of acute appendicitis with rupture and spreading peritonitis was made and the patient was taken to the operating room for surgery.

On opening the abdomen, cloudy non-odorous fluid welled into the wound. Then a stringy material with color consistent with small bowel contents was aspirated. This was followed by a discharge of a foul smelling material. The appendix

was located and found to be normal. An estimated 12 to 18 inches from the ileocecal valve on the anti-mesenteric border of the ileum was a round, smooth, punched out perforation. The serosal surface of multiple loops of small bowel was red and edematous, and a plastic exudate was present on the serosal surface. About the area of perforation, there was an area of edema and marked hyperemia. The fluid was aspirated, a wedge-shaped piece of ileum containing the lesion was excised, and the ileum was sutured transversely. The appendix was removed. The wound was not drained.

His postoperative course was uneventful. Gastric suction had been instituted prior to surgery, and this was continued during the first two days of his postoperative course. Fluid and electrolyte balance was kept in satisfactory condition using crystalloids and electrolyte solution as indicated. He was discharged on the twelfth postoperative day.

Pathologic examination of the specimen taken as a biopsy at the time of surgery revealed the following: Gross examination: The specimen was described as an irregular piece of soft pinkish-grey and red tissue which was more or less buttery in consistency and was purported to be from the ileum. No definite landmarks could be made out. The whole piece in multiple fragments was subjected to histologic examination. Microscopic diagnosis: A portion of ileum with acute ulceration and subacute and chronic inflammation. The pathologist's comment was as follows: "The exact distribution of the inflammatory process cannot be determined. It appears to be a subacute ulceration with extension through the wall and an acute peritonitis. No specific etiology is suggested."

During the postoperative period, agglutinations for typhoid and paratyphoid fever were done. They were normal.

It is questionable whether the trauma which occurred six days prior to the sudden onset of his present illness resulted in a change in the bowel wall which finally resulted in spontaneous perforation. This is conjectural. There was no evidence of adhesions between any of the serosal surfaces and it is doubtful whether the previous abdominal trauma had any direct bearing on the perforation.

Case 2.—A. D., a 14-year-old colored female, was admitted to the hospital complaining of fever, abdominal distention, nausea, vomiting, and obstipation. The onset of her present illness was approximately ten days prior to hospital admission when she began having severe cramping abdominal pain. This was followed by nausea and vomiting. She remained under the care of her local physician during this ten-day period, during which time she received multiple types of antibiotics and symptomatic care with no improvement in her

condition. The onset of distention occurred approximately three days before hospital admission and fever became extremely high. She had been given intravenous fluid at home and in a local clinic, thereby maintaining a fair fluid balance. On arrival at the hospital she appeared extremely ill. She had no previous gastro-intestinal complaints and her past history was non-contributory.

Physical examination revealed a young colored female acutely ill, with a pinched expression and signs of moderately severe dehydration. Her temperature was 104° F, pulse rate 120, and respiratory rate 24. The physical examination was otherwise normal down to the abdomen. The abdomen was distended, tympanitic, and tender throughout. No palpable masses of abdominal viscera could be made out. Rectal examination was normal.

The RBC was 4,400,000, WBC 28,500, Hgb. 14 Gm. The urine was negative. The condition was diagnosed as acute appendicitis with rupture and general peritonitis. She was carried to the operating room for surgery.

When the abdomen was opened a large amount of fluid characteristic of small bowel material was present. Recalling the previous case immediately caused a search for the perforated area in the small bowel. This was found approximately ten inches from the ileocecal valve. This was a round, punched out area on the antimesenteric border. There were friable fibrous adhesions between multiple loops of small bowel in the vicinity of the perforation. The examination of the mesentery showed no enlargement of the mesenteric lymph nodes, but there was considerable edema in the mesentery of the small bowel in the vicinity of the area of perforation. The appendix was located and peri-appendicitis was noted, but the organ itself was thought to be free of disease. A biopsy of the area about the perforation was taken, and the perforation sutured transversely, using a two-layer closure. The appendix was then removed. The closure of the abdomen was started in layer fashion and, as the skin was being closed, the anesthesiologist stated that the patient's condition was extremely bad. No pulse or respiration was noted. On further observation, it was observed that the patient had essentially expired. All efforts at resuscitation were tried but to no avail.

The pathologic report of the biopsy specimen was as follows: The gross description revealed an irregular piece of tissue, apparently bowel, the exact identity of which could not be made out. The whole piece in multiple fragments was subjected to histologic examination. The microscopic diagnosis was a portion of ileum with acute ulceration and inflammation. The pathologist commented that the etiology of the inflammatory process could not be determined. It appeared to be acute ulceration

with extension through the wall of the bowel resulting in perforation.

This patient did not have agglutinations for typhoid or paratyphoid fever in that she expired at the completion of surgery. It is questionable whether typhoid fever could have been the cause of this perforation. There were no characteristic pathologic findings of typhoid present at the time of operation. This perforation was a localized process in the ileum. This patient reminds all of us that inadequate preoperative preparation is essential before surgery is performed in spite of the desperate situation that the patient appears to be in. Had adequate advantage of gastric suction, fluid therapy, and corticoids been used, it is likely that this death could have been avoided.

Summary: Two cases of perforation of the small bowel are reported. No etiologic bases for the perforations could be established.

REFERENCES

1. Abt, I. A.: *M. Clin. North America* 15: 611, 1931.
2. Aird, T.: *Brit. J. Surg.* 24: 529, 1937.
3. Berman, H., and Rosner, H.: *Am. J. Surg.* 58: 137, 1942.
4. Christopher, F.: *Am. J. Surg.* 15: 628, 1944.
5. Fick, K. A., and Dolken, A. D.: *Lancet* 1: 519, 1949.
6. Mason, L. W.: *Internat. J. Surg.* 24: 350, 1955.
7. MacMillan, S. F.: *Am. Surg.* 111: 49, 1940.
8. Robinson, S.: *West. J. Surg.* 46: 312, 1938.
9. Russell, T. H.: *Tr. New England S. Soc.* 22: 286, 1940.
10. Thelander, H. E.: *Am. J. Dis. Child.* 58: 371, 1939.
11. Wilensky, A. O., and Kaufman, P. A.: *Am. Surg.* 106: 373, 1937.

Thick Peels May Reduce Potato Caloric Value—Thin potato peelings have always been the sign—and the aim—of an economical housewife.

But there may be at least one situation when a thick peel is desirable, according to Dr. William W. Bolton, associate editor of *Today's Health*, an American Medical Association publication.

In answer to an overweight, potato-loving reader asking how potatoes can be prepared so they will be less weight-building, Dr. Bolton said the starch that provides most of a potato's caloric value is near the skin.

Thus he recommended that the skin be cut away in a thick peel.

He added, however, "We cannot give you any assurance that caloric intake will be greatly reduced, but at least it would be lowered some. . . ."

He also recommended that cream sauces be avoided and that butter and margarine be kept to a minimum. And baked potatoes are "surely off limits."

Dr. Bolton noted that potatoes are not just starch. An average-sized potato provides 85 calories and has a water content of 77.8 per cent. Vitamins A and C are present in appreciable amounts, as are calcium and phosphorus. There are trace amounts of iron and vitamin B fractions.

His comments appeared in the December *Today's Health*.

PRESENT CONCEPTS IN THE MANAGEMENT OF POSTERIOR NASAL EPISTAXIS

JAMES J. HICKS, M. D., JAMES J. BUSHNELL, M. D.,
and
JULIUS N. HICKS, M. D.
Birmingham, Alabama

I. INTRODUCTION

Epistaxis still remains a frequent problem of physicians in general, and otorhinolaryngologists in particular. Etiologic factors most often associated with this condition may be divided into those of local and those of systemic nature. The local factors most often noted are trauma, acute or chronic infections with involvement of the nasal mucous membrane, septal perforations or deviations, neoplasms, and telangiectases of Osler-Weber's disease. Hypertensive cardiovascular disease, arteriosclerotic vascular disease, increased venous tension as in pulmonary emphysema, hematologic disorders—leukemias, hemophilia, pseudohemophilia or other derangements of the bleeding or clotting mechanisms, cardiac disease, mitral stenosis and rheumatic fever of childhood, vicarious menstrual bleeding, and avitaminosis are the more common so-called generalized difficulties which often are associated with epistaxis.¹

Cases of epistaxis which present to the otorhinolaryngologist fall roughly into two groups: those in which the bleeding point can be found by careful examination of the nose, and those in which the bleeding occurs in the posterior reaches of the nose and usually cannot be well-visualized. The former group comprises by far the greater number of cases, and most of these present with a bleeding point in Little's, or Kiesselbach's, area along the anterior portion of the nasal septum where the well-known venous plexus exists. The bleeding in this former group almost always stops spontaneously, and, if not, can usually be readily controlled by the judicious use of pressure and topical cauterization, either electrical or chemical. It is with the latter group of cases, a group in which the handling of the patient can become quite a problem, that this general discussion will be mainly concerned.

II. DISCUSSION OF THE IMMEDIATE MANAGEMENT OF POSTERIOR NASAL EPISTAXIS

All nasal bleeding originates from vessels supplied by the sphenopalatine or anterior ethmoid arteries. The sphenopalatine artery arises from the external carotid artery, while the anterior ethmoid artery arises from the ophthalmic artery which comes off the internal carotid artery near the origin of the anterior cerebral artery.² Woodruff has described the venous plexus underneath the posterior portion of the inferior turbinate as a frequent site of bleeding, especially in elderly

persons.³ Bleeding occurs here quite frequently and can often be controlled by localization of this site of bleeding and the topical application of pressure and cauterizing agents to the area of bleeding, but, as previously mentioned, many bleeding points are often high posteriorly and cannot be seen. Control of the bleeding in these cases requires the insertion of anterior and posterior nasal packing.

The insertion of the packing can be painful, but can usually be accomplished without delay with sedation, topical anesthesia, and attention to several important factors in the insertion of the pack.

The sedation of these patients is ordinarily carried out with Demerol or morphine, but one should exercise care in their use. Demerol exerts a strong hypotensive effect which may tip the balance in a patient who has bled down to borderline shock.⁴ Morphine should be avoided in individuals with pulmonary insufficiency (asthma, emphysema, etc.) due to its respiratory depressant effect.⁵

Topical anesthesia is preferable to general anesthesia in the initial packing of the patient with posterior nasal hemorrhage. The risk of general anesthesia is greatly increased by the following factors: (1) it is likely that the patient has swallowed and accumulated large amounts of blood in the stomach which may early initiate a hypersecretory gastritis and doubly predispose the patient to pulmonary aspiration; (2) the patient may be in or close to shock from blood loss; and (3) there may be very active bleeding into the nasopharynx.

Xylocaine (2%) and cocaine (5%) are suitable anesthetic agents for this procedure and should be applied not only to the nose but to the nasopharynx, pharynx, and soft palate.

A posterior pack of appropriate size is prepared from moistened gauze sponges, and vaselinated gauze strips one-half to one inch in width are used for the anterior packing. The description of the insertion of the posterior and anterior packing may then be divided into five steps: (1) a No. 14 soft rubber catheter is inserted through the nose into the throat and brought out through the mouth; (2) strong strings attached to the posterior pack are tied to this catheter and pulled out through the nose trailing the catheter as it is withdrawn through the nose; (3) the posterior pack is inserted *tightly* into the choana on the side of bleeding—in

this maneuver the pack should be placed into the nasopharynx with a suitable instrument and should not be pulled into the nasopharynx and cause a "sawing" type of trauma to the soft palate by the string; (4) the entire nasal chamber on the side of bleeding is *tightly* packed with the vaselinated gauze strips; and (5) the strings of the posterior pack passing through the nose are tied over a gauze sponge placed over the tip of the nose. We feel that it greatly reduces the discomfort of the patient if we do not bring strings attached to the posterior pack out through the mouth. This has been described as helpful in the removal of the pack, but we find that the posterior pack can be always easily removed using a suitable curved instrument or using strings only one to two inches in length. Large amounts of Oxycel should never be used. It should always be applied in small amounts only to the actual site of bleeding. It is then our policy to admit all persons with posterior nasal packs to the hospital.

III. DISCUSSION OF THE EVALUATION OF THE PATIENT IN THE HOSPITAL

In the hospital a complete history should be taken, with particular emphasis on any history of recent infections, cardiovascular disease, diet and nutrition, and recent ingestion of any drugs to which the patient may be allergic, and, of course, any family history of bleeding—hemophilia, congenital hemorrhagic telangiectasis, etc. After a careful physical examination, one should also never hesitate to obtain laboratory studies indicated. Laboratory studies should almost routinely include the hematologic studies of CBC, platelet count, bleeding and clotting times, prothrombin time, and prothrombin consumption time. As specific therapy as possible should be given to combat any abnormality uncovered by these studies. Since carcinomas of the sinuses often present as epistaxis, it is wise to get sinus films in addition to x-ray films of the chest.

IV. DISCUSSION OF THE HOSPITAL TREATMENT OF THESE CASES

The most common problem requiring immediate action on admission to the hospital is that of recent, profound blood loss. Patients can succumb to this, and most of them do so because of blood loss. Here it is important to remember that in cases of acute blood loss the vascular bed can require eighteen to twenty-four hours for stabilization, and there should never be any hesitation to transfuse a patient with the clinical picture of shock from blood loss, regardless of laboratory studies which may indicate a normal hemoglobin or hematocrit. With these factors in mind a concerted effort should be made to maintain the patient at a hemoglobin of 11 grams, or comparable hematocrit, as soon as possible. After packing, difficult cases may warrant

hemoglobin or hematocrit studies two or more times daily until vascular compensation is completed. This is especially applicable to a patient in whom there is persistent oozing. Persistent oozing of blood around a loose pack can result in a 500 cc. blood loss over a period of twenty-four hours.

Further care involves what may be termed close observation and conservative treatment. The patient should be placed on antibiotics to prevent the occurrence of infection and sedated carefully each day. Sedation is particularly important in elderly persons because they frequently have bouts of nocturnal confusion. The intake of nourishment and fluids and vital signs should be carefully observed. After completion of appropriate laboratory studies, a regimen of multiple vitamins, Hykinone, Adrenosem, and Premarin may be given although their efficacy is difficult to prove. Topical ice packs to the nose are often comforting to the patient. Early ambulation to minimize the incidence of thrombophlebitis is a further good rule. Pack removal should generally be started after four days. It is helpful to remove the anterior packs partially first and then complete the removal of all packing twenty-four hours later.

Two problems noted with increasing frequency recently, now that we are more aware of them, are pseudohemophilia and blood ammonia intoxication. A prolonged bleeding time is the chief clue to the former problem, and pseudohemophilia ordinarily responds remarkably well to steroid therapy.⁶ The latter, blood ammonia intoxication, is most commonly found in persons with liver disease. Blood swallowed during epistaxis, as well as other bleeding from the upper GI tract, can result in a large nitrogenous pool in the intestines and may produce high blood ammonia levels. Abnormally elevated blood ammonia levels found in liver disease are due to a defect in the conversion of this compound into urea by the liver and may result in inhibition of oxygen metabolism in the tissue of the central nervous system.⁷ Its treatment is involved but an attempt should be made to decrease ammonia production and absorption from the intestinal tract. Laxatives should be given early to purge the intestinal tract, and further treatment includes the overall management of patients with liver disease. This includes a low protein diet, and, at times, the use of oral neomycin to curb the ammonia production of bacteria of the GI tract and glutamic acid and arginine given systemically. Recent investigation tends to point out that arginine is the more efficacious of the two.⁸ It might be well to state here that the ENT specialist can often utilize the aid of a physician interested in general medical problems in caring for these patients.

In patients with persistent oozing in spite of good tight packing, fresh blood transfusions may be given. Occasionally, patients have to be repacked. This is usually best done under general anesthesia. The literature contains numerous procedures described for the ligation of the external carotid artery and its branches of importance in the nasal area, the sphenopalatine and anterior ethmoid arteries. Although these measures may be sometimes necessary, *tight* nasal packing almost completely excludes the use of these measures.

CONCLUSION

The good management of posterior nasal hemorrhage involves attention to many details, and one must put particular emphasis on blood replacement problems, proper, tight packing of the nose, and overall evaluation of the patient for possible associated systemic medical disease.

722 Medical Arts Building
Five Points South.

BIBLIOGRAPHY

1. Hallberg, L. D.: Severe Nosebleed and Its Treatment, *J. A. M. A.* 48: 355-359, 1952.
2. Silverblatt, Bernard L.: Epistaxis Evaluation of Surgical Care, *Laryngoscope* 55: 431-447 (June) 1955.
3. Woodruff, G. G.: Cardiovascular Epistaxis and the Naso-Nasopharyngeal Plexus, *Laryngoscope* 59: 1238-1247 (Nov.) 1949.
4. Drill, Victor A.: Pharmacology in Medicine, McGraw-Hill, New York, 1954, p. 18/4.
5. Ibid, p. 17/5.
6. Jacobsen, B. M.: The Effects of Cortisone and Corticotropin on the Prolonged Bleeding Time; Treatment in Certain Hemorrhagic States (Pseudohemophilia), *A. M. A. Arch. Int. Med.* 92: 471-477 (Oct.) 1953.
7. McDermott, W. V., Jr.; Henneman, D. H., and Laumont, C. L.: Metabolism and Toxicity of Ammonia, *New England J. Med.* 257: 1076-1081, 1957.
8. Najarian, John S.; Harper, H. A., and McCorkle, H. J.: The Diagnosis and Clinical Management of Hepatic Coma in Surgical Patients, *Surgery* 96: 172-182 (Aug.) 1958.

The third inoculation in polio immunization is a "must," but what about a fourth?

Although administration of annual booster injections has been suggested, the opinion also has been expressed that the three-dose course provides a satisfactory response, according to the publication "Patterns of Disease" prepared by Parke, Davis & Company for the medical profession.

The publication further points out that delay in administering the second inoculation produces antibody levels as good as, if not better than, those achieved when the first two inoculations are spaced one month apart.

Prior to their second inoculation which was delayed five months, only 33 per cent of 221 school children had antibodies to the three types of polio viruses and 13 per cent lacked them altogether.

Two weeks after the delayed second inoculation all children had at least one type of poliovirus antibody and 85 per cent had antibodies to all three.

Heart-Lung Machine Used in Cancer Treatment—A new treatment for at least one type of cancer, involving the use of a heart-lung machine and a chemical, has been described by three Tulane university physicians.

Writing in the January 24 Journal of the American Medical Association, Drs. Oscar Creech, Jr., Robert F. Ryan, and Edward T. Krementz, New Orleans, said they have used the technique to treat 41 cases of malignant cancer, including eight of melanoma.

Melanoma is a malignant and rapidly fatal tumor resulting from excessive growth of the pigment-containing cells in the skin. Often beginning as a mole which undergoes rapid change, the cancer spreads rapidly to other parts of the body through the blood and lymph systems. This characteristic makes it difficult to treat.

The cases of melanoma were treated with a heart-lung machine and phenylalanine mustard, an analogue of nitrogen mustard, a fairly common cancer treatment drug.

One of the problems of both phenylalanine mustard and nitrogen mustard is their severe side effects, especially the depression of blood cell production by the bone marrow.

These side effects can be avoided through the use of a heart-lung machine, the doctors said. They explained how they use it in the treatment of melanoma of the lower extremities.

The normal blood flow to the leg is shut off from the rest of the body, and a separate circulatory system is set up for the leg by attaching the heart-lung machine to an artery and a vein. After the machine is operating, phenylalanine mustard is injected into the artery and allowed to circulate through the leg.

The isolation of the tumor-bearing area prevents the spread of the chemical throughout the body, thus reducing the chances of side effects. In addition, the chemical is concentrated in the affected area, thereby increasing its effect on the tumor.

The doctors said they used this "isolation-perfusion technique" in addition to surgical removal of the primary or recurrent melanoma lesions.

Among the patients, six were treated for extensive (cutaneous) spread of the melanomas, the primary lesion having been removed previously. The other two had the primary lesions removed in conjunction with the isolation-perfusion technique. All but one were free of disease outside the involved extremity.

The first patient to be treated with the technique has been followed for more than a year, the doctors said. During the year, almost all of his cutaneous lesions disappeared, and only six of an original 175 diseased areas remained. They have shown no evidence of growth and apparently the disease is controlled, the authors said.

One patient, a 72-year-old man, died. He had metastatic melanoma covering almost the entire surface of the right leg which spread to the lymph nodes in the region of the small intestine. The doctors noted that isolation of the perfused area was not complete, and severe depression of bone marrow occurred within a few days.

They said evidence, derived largely from the first patient, suggests that phenylalanine mustard, in addition to destroying cancerous cells directly, also initiates certain changes which make the cells more susceptible to resistance factors in the body. This assumption is based primarily, they said, on the observation that regressive changes in tumors continue long after the drug has become inactive and after the period of acute cell destruction resulting from the chemical agent has passed.

New Blood Test Is 85% Accurate in Arthritis Diagnosis—A relatively new blood test for rheumatoid arthritis has been shown to be about 85 per cent accurate by two new studies.

The test involves adding particles of specially treated bentonite, an aluminum salt, to blood serum. If the patient has rheumatoid arthritis, the bentonite particles clump in a particular manner.

It is similar to other blood tests for arthritis, which use sheep blood or latex as the clumping material. However, the bentonite test is simpler and speedier than the other tests, according to Drs. Kurt J. Bloch and Joseph J. Bunim of the National Institute of Arthritis and Metabolic Diseases, Bethesda, Md.

Their study, along with one by five Philadelphia researchers, appears in the January 24 Journal of the American Medical Association.

The two studies confirm earlier suggestions that the bentonite test might be useful in the specific diagnosis of rheumatoid arthritis, which has been termed the "nation's No. 1 crippler." A virulent form of arthritis, the disease is an inflammation of the joints. Because of its similarity to other forms of arthritis, rheumatoid arthritis is difficult to diagnose in the early stages when treatment is most effective.

The blood tests offer a means of early diagnosis. At present only a few laboratories perform them because of their complexity. However, the Philadelphia researchers believe the bentonite test is a step toward an accurate, simple, inexpensive, and dependable laboratory aid that could be used in many laboratories.

Drs. Bloch and Bunim studied 429 patients in whom rheumatoid arthritis or some other disease was definitely diagnosed by clinical examination. The blood test finding was positive in 97 (85 per cent) of 114 patients with rheumatoid arthritis. Only 3 per cent of the whole group reacted to the test when they did not have rheumatoid arthritis.

The Philadelphia researchers, who studied a total of 160 patients' serums, found the test to be accurate in 83 per cent of 48 patients with clinically confirmed rheumatoid arthritis.

They said their results were comparable to those in previously reported blood studies with more difficult and expensive procedures.

The Philadelphia research team was headed by Dr. Russell A. DeToro, of the department of medicine, section of rheumatology, Benjamin Franklin Clinic, and the Pennsylvania Hospital.

Crash Diets for Athletes Considered Dangerous—Crash diets and drying out by high school wrestlers and boxers trying to make a certain weight class are to be condemned, according to the American Medical Association's Committee on Injury in Sports.

In a statement in the January 26 AMA News, the committee, along with the National Federation of State High School Athletic Associations, called for an unannounced "weighing in" at the beginning of the season. A boy should remain throughout the season in the class established for him at the "weighing in."

The groups also suggested an increased number of weight classes for athletes to minimize the advantage of making a certain class.

Many schools have interscholastic wrestling, but only two states (Idaho and Oregon) permit interscholastic boxing in high school, the statement said.

Boys going on crash diets several times a year to make weight classes led to the statement.

"Under the strong motivation and appeal of sports, the diets and drying out may be carried to great extremes," the two groups said. "Such efforts are not consistent

with the spirit of sport in that they tend to defeat regulations designed to insure fair and equitable competitions."

The crash diets, "sometimes approaching the starvation level," also are condemned from a health standpoint. "Disturbing the fluid balance of the body by drying out holds serious health hazards," the groups continued.

"These dangers are intensified in the immature organism of the growing adolescent athlete. They are also intensified by periodic weighings which encourage the athlete to resort to such practices at frequent intervals during the season," they said.

Under the present system in which crash diets are used, an athlete may be competing in a class below that in which he rightfully belongs, or a boy competing in his proper class may be pitted against much heavier boys who "made" the weight below their real class.

No plans of classification of athletes is infallible, the groups said, but they believe their recommendations "provide the best guarantee of equitable competition with a healthful experience for the participants."

New Treatment Approach Suggested for Emotional Illness—A new approach to the treatment of emotional illness has been suggested by two New York psychoanalysts.

They believe that many emotional illnesses are at least partly the result of a person's "quest for certainty." The neurotic behavior represents a means of obtaining certainty.

Most neurotic persons repeat their behavior over and over; they are certain of its outcome and refuse to risk trying a new approach to their problems.

Nearly all the categories of emotional illness may be interpreted as resulting from a quest for certainty, Emanuel K. Schwartz, Ph. D., and Alexander Wolf, M. D., said in the January Archives of Neurology and Psychiatry, published by the American Medical Association.

For example, the schizophrenic person withdraws from the threatening environment to the security of his own internally remade world; the depressed person feels that if he withholds all criticism, anger, and aggression, he will be certain not to provoke or to incur the dangers of the hostile and destructive forces around him.

The perfectionist feels that if he is perfect, if he is certain to make no mistakes, he cannot be punished or endangered. Even the hypochondriacal person uses his pills as a way of finding certainty. By taking them, he is certain that he can get through the day.

By approaching such patients through the concept of the search for certainty, psychotherapists may be able to help some patients toward a more healthy mental state, the authors believe.

The "quest for certainty" is tied up with an individual's ability to assess the probabilities of success or failure and safety and danger in a situation and his willingness to take risks.

A person with a healthy mental state is willing to take risks—sensible risks based on a realistic appraisal of the situation. He develops a certainty of what he can and cannot do, but also recognizes that absolute certainty is an impossibility.

Persons who refuse to take many risks are often persons who demand absolute certainty as shown by the outside situation or by a "feeling inside." They are unable to recognize that most situations present risks and uncertainties.

The authors said that the quest for certainty may be viewed as a person's attempt to cope with the anxiety that is always present when there is an unknown factor. The anxiety is a warning of possible danger. When the normal person is warned, he must evaluate the nature of the danger in terms of what is really there.



RESEARCH DOG HERO OF 1958

The National Society for Medical Research has formally conferred the title of Research Dog Hero of 1958 on a mixed-breed, three-year-old dog from the Deep South.

The dog is Big Ben, a large, mostly German shepherd animal. He was selected for the honor because of his part in Tulane University research which has placed medical scientists on the threshold of a startling new technique for attacking brain cancers.

Ben, a roguish, clownish canine according to the men who worked with him at Tulane, has "retired" from service as a research animal and is the adopted pet of a New Orleans family.

His outstanding service to science took place during a year-long period, in which he provided living proof of the feasibility of a new perfusion treatment for deadly brain tumors.

He was twice the subject of experiments which showed that the technique called perfusion could be useful in the battle against cancer in human limbs and other organs. He also served as a blood donor for other animals. Once Ben had his own life saved by an emergency operation to stop a massive hemorrhage in his neck.

Ben's medical "career" began in the middle of 1957 and revolved about a radical new technique which was first developed at Tulane as a major weapon in the fight against cancer.

This technique, called perfusion, was developed by a team of medical scientists from the Tulane medical school's department of surgery, under the direction of Dr. Oscar Creech, Jr., chairman of the department.

The technique has two major elements.

First, a limb or organ of the body is blocked off from the normal circulatory system by tourniquet.

Immediately after this isolation, a heart-lung machine is attached to the blocked-off limb or organ to provide it with a separate supply of life-sustaining blood.

In effect, this provides the patient with two circulatory systems operating independently. The

Editorials

normal system has the heart pumping the regular blood supply through most of the body, while the secondary system has the heart-lung machine pumping a treated blood supply through the isolated limb or organ.

This enables doctors to add above-normal doses of powerful, cancer-fighting drugs directly to the special isolated blood stream—to perfuse that part of the overall system with drugs. Circulating in this way, the drugs directly attack and kill the cancer, then flow out of the system again through the machine.

When this process is completed, the treated limb or organ is returned to the normal circulatory system.

This new technique makes possible a direct attack on cancer without surgery and might reduce the need for major amputations.

Through perfusion, medical men now can use drugs at two to three times the strength otherwise possible. If injected directly into the regular blood stream in such amounts, they would destroy vital tissue and would be fatal.

And it was Big Ben's medical career which made possible the improvement of this technique to the point where the brain, which is often the site of deadly tumors, can be successfully perfused in experimental animals.

To date, the perfusion treatment has been used in 73 instances on human patients' limbs and organs at Tulane. Brain perfusion has yet to be attempted on a human being. But it is likely that it soon will be, and Tulane medical scientists mark Big Ben's contribution as a milestone in medical progress against one of nature's cruelest diseases.

The big dog arrived at the Tulane medical school last year at the time when basic work was being done in perfusion. He had been sent to the school after being picked up as a stray in Mississippi.

The scientists' problems then were to determine how much anticancer drug could be used without seriously endangering normal tissue, and to develop a proper method to tie the heart-lung machine into the circulatory system of the limb or organ involved.

First, Big Ben's left hind leg, then his right hind leg were studied during perfusion tests.

Then he underwent the first successful perfusion study of the brain. He came out of the operation with no ill effects and provided substantial information for use in possible future operations on human brain tumors.

A few days after the operation, however, his neck began to swell rapidly while four Tulane medical students were exercising the playful, 65-pound animal. Big Ben went into coma. His condition was critical.

Acting quickly, the students rushed the dog to surgery. Artificial respiration was administered while the neck was opened and a massive hemorrhage stopped.

The operation was an unqualified success and the patient was soon his rollicking, normal self—the pride of the animal house where the attendants knew only too well that Big Ben was king. He was the first to be fed. He was the first to have his ears scratched, the first to be exercised. In short, he was the object of most affection and almost all attention.

The decision was then made.

Big Ben had done his job. He deserved a home of his own.

As soon as this was made public, applications flooded into the school. These were carefully screened and, in August, Ben became the pet, playmate and watchdog of a local family with three children. He has been one of the luckiest of lucky dogs, and is a beloved pet and a neighborhood celebrity.

The award presented by the National Society for Medical Research is a special collar bearing a silver plate with an inscription identifying Big Ben as Research Dog Hero of 1958.

FIRST DIRECTORY OF BLOOD FACILITIES

The first comprehensive directory and description of blood facilities and services ever compiled in this country has been released by the Joint Blood Council, a nonprofit national organization with headquarters in Washington, D. C.

It shows the location of facilities, the extent of their operations, how they are organized, what specific services they offer, and other information of importance to physicians, hospitals and any person or organization interested in blood and its derivatives.

The directory is based on data obtained from a detailed questionnaire sent to all known blood banks, hospitals and clinics that offer blood-handling services. The questionnaire was sent to 3,150

institutions and 2,202 replied. Those that failed to return the information will have an opportunity to supply it for future directories.

"The directory supplies vital information long needed by physicians, hospital staffs and others associated with the practice of medicine," according to Dr. Leonard W. Larson of Bismarck, N. D., president of the Joint Blood Council. "We now for the first time have a central reference and index to institutions and agencies concerned directly or indirectly with the therapeutic use of blood and its derivatives. We are grateful for the cooperation we received and are satisfied that the information presented is as complete as possible at this time. We are looking forward to listing virtually every blood facility in the United States in future revisions of the directory."

The directory will be distributed free by the council to all institutions and organizations that participated in its preparation, according to Dr. Frank E. Wilson, executive vice president. Others may obtain it at the cost price of \$1.50 each from the Joint Blood Council headquarters, 1832 M Street, N. W., Washington 6, D. C.

The council was formed three years ago by the American Association of Blood Banks, the American Hospital Association, the American Medical Association, the American National Red Cross and the American Society of Clinical Pathologists. Its primary purpose: "To establish a national blood program in order to assure an adequate supply of blood and blood derivatives to the civilian and military population at all times of peace or emergency and to take all appropriate action in connection therewith."

The directory is presented in three parts: Part I lists all 2,202 cooperating blood facilities, with detailed descriptive data, in alphabetical order by state and city. Part II is a summary of all "community blood banks" which are not administratively controlled by specific hospitals or the American Red Cross. Part III lists all Red Cross regional centers, with appropriate data. The detailed classification of facilities indicates the degree of specialization in the administration, processing and storage of blood and its derivatives as well as the extended coverage offered by it.

Information brought out in the survey and directory includes the following:

1. Of the facilities listed, 1,832 administer whole blood. Also 1,287 administer plasma, 1,021 serum albumin, 994 packed red blood cells and 311 platelets, with many of the facilities engaging in a number of these activities.

2. Many of the institutions also are engaged in storage of other body tissues. Artery banks are maintained by 116, eye banks by 36, bone banks

by 200, skin banks by 24 and mother's milk banks by 20.

3. A total of 1,325 blood banks store whole blood, record donor histories, and have as their primary purpose the recruitment of donors and complete laboratory blood processing. The directory shows whether these banks obtain less than half or more than half their blood from their own recruiting efforts and whether blood processing includes compatibility (crossmatch) testing.

4. Two out of every three organizations listed have no reciprocity system for the exchange or re-supply of blood. Of the remaining one-third, which do participate in a national system, 470 use the American Red Cross system, 240 that of the American Association of Blood Banks, and 110 use both systems.

5. Community blood banks and Red Cross regional centers present an entirely different picture with regard to reciprocity, as shown by these data:

Reciprocity System	Community Banks	Red Cross Centers
American Association of Blood Banks.....	62	0
American Red Cross.....	0	41
Both AABB and Red Cross.....	19	8
None	18	0
Total	99	49

The directory is the forerunner of a complete report of the activities of most organizations engaged in blood services of any kind. This forthcoming report will present the details of operations, quantities and persons serviced, practices and procedures, and other statistical data which were collected during 1957 and 1958 under a project directed by a committee of eminent physicians and scientists.

Members of the Project Advisory Committee are: Dr. Frank E. Wilson, chairman; Drs. Kenneth M. Brinkhous, Roger W. DeBusk, David N. W. Grant, James J. Griffiths, Max M. Strumia, Frank G. Dickinson, and George W. Hervey.

Officers and directors of the Joint Blood Council are: President Leonard W. Larson, M. D.; Vice President LeRoy E. Bates, M. D.; Executive Vice President-Secretary Frank E. Wilson, M. D.; Treasurer Oscar B. Hunter, Jr., M. D. Other Board members are: Kenneth B. Babcock, M. D., James D. Barger, M. D., Sam T. Gibson, M. D., W. Croft Jennings, Frank W. Konzelmann, M. D., Walter B. Martin, M. D., and E. Eric Muirhead, M. D.

ANNUAL SESSION
BIRMINGHAM
APRIL 9, 10 and 11

Mechanical Brain Use Growing in Medical Sciences—Electronic computers have been used in industry and in warfare, but now they are moving into the biologic and medical sciences.

Some of the dozens of uses they have in science were described in an article in the January 17 Journal of the American Medical Association.

Harry Weinrauch, M. D., and Albert W. Hetherington, Ph. D., of the U. S. Air Force's Air Research and Development Command said the mechanical brains have an almost limitless horizon for use in the medical and biologic sciences.

In fact, it has even been suggested that a modified residency program for training in computer techniques be set up for qualified physicians.

The National Academy of Sciences and the National Research Council, in cooperation with the Air Force and the National Institutes of Health, have appointed a group to consider the application of computers to medicine and biology. The group will analyze the types of medical and biologic problems in which computers have been employed and will recommend the types of situations in which they could profitably be used.

Computers have already been used in the lengthy statistical calculations required during mass standardizations of drugs and in the correlation of vast amounts of information in particular areas of public health. They were used in the evaluation of the effectiveness of the Salk vaccine, and in the studies linking tobacco to cancer and tobacco to cardiovascular disease.

A computer has already been devised which analyzes electroencephalograms and others could be used in the analysis of similar bioelectrical phenomena, such as the electrocardiogram.

Computers can be built that simulate certain systems of the body. They can be used to study the activities and the possibilities of interrelations within these systems. These, according to the authors, offer great possibilities as research tools in understanding the functioning of the body, particularly the nervous system.

Specialized computers can be designed for specific tasks. For instance, one computer has been built which is incorporated in mechanical breathing devices. The calculator measures the voluntary breathing activity of the patient and correspondingly cuts down the action of the mechanical device.

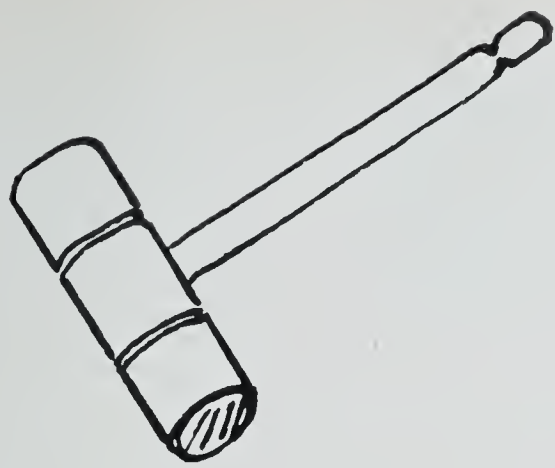
Another category of computer application stems from its ability to store and recall quickly vast quantities of information. The authors suggested that computers be used to store the tremendous amount of data recorded on hospital charts and in medical journals. The "sheer mass of this material is so staggering that it defies efforts at retrieval." At present, the problem of building a machine big enough to store such material has not been solved, but it will be in the future, the authors think.

Hormone Injections Solving Obstetric Problem—A common obstetric problem is being solved by the use of a new combination of hormones, two groups of New York researchers said recently.

Breast enlargement and milk flow in women who do not wish to nurse their babies can be inhibited by the injection of the hormone combination during or immediately after delivery, the physicians said.

The preparation, called Deladumone (trade name), is composed of a male hormone and a female hormone.

Drs. Benjamin Lo Presto and Erol Y. Caypinar, Brooklyn, said in the January 17 Journal of the American Medical Association that classic methods (fluid limitation, breast binders, ice packs, or sedation) have rarely been successful in eliminating the discomfort in non-nursing mothers.



President's Page

IATROGENIC

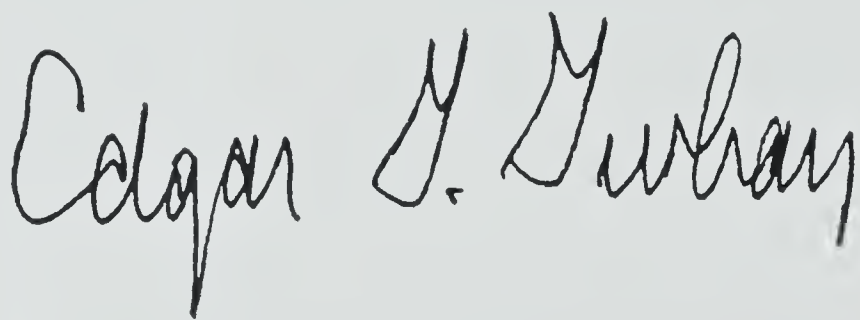
Iatrogenic—a strange word, difficult to pronounce; some of us may not know what it means but some smart doctor knew enough Greek to coin this word as the name for that group of diseases that we have caused ourselves. The intrinsic difficulties of the word suggest that he may have been trying to hide something for which we are a bit ashamed. In a measure this is true. Still the field of doctor-produced diseases is so great and the mechanisms and influences that produce them are so varied that I do not feel that we should be held entirely to blame. So many of our practices that we now recognize as harmful may have seemed proper and advisable in the past. Those heroic surgeons who performed radical pelvic surgery (the clean sweep) could not have seen the difficult vasomotor and psychic disturbances that often followed these operations. During my internship, posterior gastroenterostomy was hailed as a great cure for peptic ulcer. Before my internship was finished I was seeing those beautiful anastomoses taken down. No one foresaw that jejunal ulcers would develop and give more distress than the original ulcer. A part of our iatrogenic diseases can be recognized and justified as the result of medical pioneering. On the other hand, when experience shows that certain practices are harmful we should not persist.

When one looks at the field of drug therapy, the possibility for doctor-induced diseases becomes appalling. All of us try to avoid giving drugs in doses that are harmful or poisonous. There are drugs, however, that may be entirely safe for the great majority of people but in a few may cause serious reactions and disease. The wonderful drug penicillin causes severe skin disease in a small number of patients and has caused sudden death. Our own Roy Kracke was the first to point out that certain drugs derived from coal tar by-products, particularly amidopyrine, caused a serious disease, agranulocytosis. Recently, there has been the disturbing suggestion, not yet proven, that some of the reactive diseases of collagen tissue that seem to be occurring more frequently may be reactions to some of the drugs that we prescribe so freely. The drug manufacturers may be guilty of a practice that leads us to many errors. Whether they

plan it or not we find reports of new drugs that they have just manufactured with claims of fabulous cures appearing in lay papers and magazines. The layman reads these articles with great avidity and accepts the fabulous claims on their face. He is apt to accept the claims in the article over your own best judgment. How often we are persuaded to prescribe a new drug because the patient or a relative has read an account in a weekly news magazine or in a financial journal. All too often the drug does not live up to the claims. Worse still, it sometimes produces unpleasant and dangerous side effects. One of the most serious iatrogenic diseases of which we are guilty is drug habit or drug addiction. Even the simplest drug, such as oxygen, may be habit forming. Of course, those wonderful drugs of the narcotic group are the worst. These drugs have so many good effects it is hard to see how we could practice without them. During my days in medical school, our professor of therapeutics used to ask the hypothetical question: "If you were cast upon an island with the survivors of a shipwreck and had only one drug with which to treat the fellow survivors what would you want it to be?" He would then tell why it should be morphine. With all of their wonderful properties, opiates are dangerous drugs. Their ability to undermine the will and alter the moral fiber of an individual when used in excess is frightening. All too often, through ignorance, carelessness or laziness, doctors allow patients to become addicted to these drugs. Sometimes they inflict themselves with the same sad illness. The right to prescribe and dispense these drugs, with their great power for good and their equally great potentiality for harm, should be guarded as a sacred trust.

Finally, I wish to discuss a group of iatrogenic diseases that we produce by suggestion. The confines of this page do not permit a catalogue of all of the diseases in this group. A classic example is the doctor who covers his uncertainty about a patient's heart by telling him he has a slight "heart condition." A seed of anxiety has been sown that can grow to a completely disabling cardiac neurosis. The layman views his heart as an organ of considerable importance as is evidenced by the poet whose heart leaps up when he beholds a rain-

bow, the statesman who explains momentous decisions he has made by admitting that the heart tells when the mind cannot speak, and the lover who loves with all of his heart. As doctors we should be careful never to create any doubt about this magnificent organ. If we are in doubt ourselves we should seek consultation. One last word about the highly regarded annual physical examination. No doubt there is merit in the procedure but thoughtless and inexperienced hands often uncover defects that are uncorrectible, unimportant, harmless, and usually the natural concomitants of advancing years. Telling a patient of these defects may create a crippling anxiety. The physician may feel compelled or feel that it is wise to acquaint the patient of these defects. If he does, he should take the time to explain their nature, why they occurred, and their real bearing on the individual's health. "To cure sometimes, to relieve often, to comfort always," should be a good guide for our practice.



Immunization Schedules Listed for Adults—Immunization schedules for adults were outlined in the December 27 Journal of the American Medical Association.

Answering a query from a Michigan physician, one of the 900 physician consultants to the Journal said the "optimum intervals" for adult immunization, assuming that an adequate initial immunization series has been given, are as follows:

- Smallpox. Vaccination is needed every three years.
- Diphtheria. Immunization is not recommended for adults except in cases where the person shows no immunity after exposure to special risks.
- Tetanus. A booster dose should be given at the time of each injury where the danger of tetanus exists, with reinjection in the absence of an injury at intervals of no longer than five years.
- Typhoid. Reinforcing injections are necessary every three years.
- Influenza. Injections should be given every year to "risk cases," such as old or chronically ill persons.
- Poliomyelitis. Not enough time has elapsed yet to learn about the duration of protection conferred by the Salk vaccine, but a fourth dose, given not earlier than one year after the third dose, could be administered to individuals exposed to special risks.

The consultant noted that these are general guiding schedules which vary according to circumstances. For instance, for persons traveling to areas where smallpox is prevalent, revaccination at intervals as short as six months may be desirable. The same is true for persons living in areas where typhoid is common. They should get a booster dose every year.

Vitamin Supplements Unnecessary for Most Persons—Vitamin supplementation is unnecessary for normal persons following an adequate diet, the American Medical

Association's Council on Foods and Nutrition said recently.

"Vitamins are essential nutrients, and their usual source is food," the council said in a report in the January 3 A. M. A. Journal. All the nutrients essential to the maintenance of health in the normal individual are supplied by an adequate diet—one that meets the Recommended Dietary Allowances developed by the Food and Nutrition Board of the National Research Council.

These recommended levels of nutrients are believed to be adequate for maintaining good nutrition throughout life, and supplementation by vitamin preparations is in most instances unnecessary, the council said.

It criticized certain nutritional surveys which have indicated that "a variable fraction of certain segments of the population" is not receiving sufficient varieties of foods to supply the necessary vitamins.

Commenting on the surveys, the council said "generalization of these findings as a basis for vitamin supplementation of healthy individuals is not rational. The methodology employed in these surveys and the standards used for interpretation have varied considerably. It is necessary for the physician to evaluate each person individually."

The council agreed, however, that there are some situations where vitamin supplementation is both necessary and desirable.

For instance, it may be useful "during periods of illness or a deranged mode of life which may result in impairment of absorption of nutrients or deterioration of dietary quality."

It may be of value to the individual who "through ignorance, poor eating habits, or emotional or physical illness does not eat an adequate diet." For these patients, the physician's primary responsibility is to try to remove the disturbing factor. Until this can be done, supplementary vitamins are valuable in assuring an adequate intake.

The council noted that infants should receive supplements of vitamins C and D if their diets do not supply 30 milligrams of vitamin C and 400 U. S. P. units of vitamin D, the recommended daily amounts.

Healthy children fed adequate amounts of wholesome foods need no supplemental vitamins except vitamin D. Even here, vitamin preparations are unnecessary, since the vitamin D can be obtained by drinking vitamin D-fortified homogenized milk.

Adults who must follow restricted diets because of an illness, such as diabetes or stomach ulcer, may need specific vitamin supplementation. The character of the supplementation will depend on the diet, the nutrients given, and the length of time the routine must be maintained, the report said.

In addition, healthy persons may benefit from supplementary vitamins at certain special periods of life, such as during pregnancy and lactation.

Concerning multivitamin combinations, the council noted that such preparations should contain only those vitamins shown to be essential in human nutrition or metabolism. The unit quantities of vitamins included in mixtures should furnish no more than those amounts necessary to fulfill the Recommended Daily Allowances.

The physician should be careful, the council warned, that his recommendations are not increased in amount and that his patients do not follow the precept that greater concentrations of vitamins are justified in light of the little additional cost.

It is not true that "if a little is good, more would be better," the report said. In fact, an overdosage of vitamins A or D can be harmful.



ORGANIZATION SECTION

PROGRAM OF THE ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA BIRMINGHAM APRIL 9, 10, 11, 1959 DINKLER-TUTWILER HOTEL

GENERAL INFORMATION

All sessions of the Association and exhibits will be at the Dinkler-Tutwiler Hotel, convention headquarters—the sessions in the Ball Room, the exhibits in the Dinkler Room.

The maximum time consumed by essayists should not exceed twenty minutes. This time limit, however, does not apply to invited guests. It is suggested that the salient features of papers be presented within this time, reserving the complete elaboration for publication in the Journal of the Association.

All papers read before the Association should be deposited with the Secretary when read; otherwise, their publication may be delayed.

Papers will be called in the order in which they appear on the program. Should the reader be absent when called, his paper will be passed, and called again when the program is concluded.

REGISTRATION

The registration desk will be on the lobby floor of the hotel. Be sure to register.

THE FIFTY YEAR CLUB

According to custom, physicians who graduated fifty years ago will be honored by the Association at this meeting. Their names appear in the program.

HOST TO THE ASSOCIATION

The Jefferson County Medical Society

OFFICERS

S. Joseph Campbell, *President*
J. Garber Galbraith, *President-Elect*
S. Buford Word, *Vice-President*
Paul W. Burleson, *Secretary-Treasurer*

BOARD OF CENSORS

Harold E. Simon, *Chairman*
E. Bryce Robinson
Donald B. Sweeney
Brooks H. Bishop
Wallace A. Clyde

COMMITTEES

Hal Ferguson, *General Chairman*
G. J. Roscoe, *Co-Chairman*

Hotel

E. B. Glenn, *Chairman*
Sam Upchurch, *Co-Chairman*
J. Garber Galbraith

Scientific Exhibits

Chestley Yelton, *Chairman*
Gordon Ross, *Co-Chairman*
Rex B. Perkins
Paul Salter
James Davis
Jim Meadows
Bert Wiesel
John McMahon

Commercial Exhibits

J. P. Hardy, *Chairman*
Brooks Bishop, *Co-Chairman*
Clifford Holcomb
W. E. Lawrence
Robert Hogan
Perry A. Morgan
Richard Carter

Transportation

Frank Trucks, *Chairman*
Arthur I. Chenoweth, *Co-Chairman*
Landon Timberlake
Hugh Linder
Seaburt Goodman
Charles James
R. C. Green
O. T. West
Martin Anderson
J. L. Donovan
Carl Dietz
Leroy Holt

Hall

Jo Rogers Hood, *Chairman*
Harwell Davis, *Co-Chairman*
William Maddox
W. E. Doggett
L. R. Burroughs
David Vesely

Entertainment

Buford Word, *Chairman*
Thomas Boulware, *Co-Chairman*
Walter F. Scott
A. H. Green
H. A. Harris
Howard Irwin
William N. Viar
Fay Randall
Stanley Graham
Henley Smith
James A. Ward
Robert Yoe
Arthur I. Chenoweth

Finance

Ben Carraway, *Chairman*
Paul W. Burleson, *Co-Chairman*
Donald Sweeney
Arnold Royal

PROGRAM OF THE ANNUAL SESSION

OFFICERS OF THE ASSOCIATION

President

Edgar G. Givhan, Jr. Birmingham

President-Elect

William R. Carter Repton

Vice-Presidents

J. A. Brantley Troy

W. D. Anderson Tuscaloosa

E. L. Strandell Brewton

W. E. White Anniston

Secretary-Treasurer

Douglas L. Cannon Montgomery

Executive Secretary

W. A. Dozier, Jr. Montgomery

Executive Assistant

W. V. Wallace Montgomery

The State Board of Censors

E. V. Caldwell, Chm. Huntsville

J. G. Daves Cullman

W. S. Littlejohn Birmingham

G. O. Segrest Mobile

John W. Simpson Birmingham

J. Paul Jones Camden

Robert Parker Montgomery

J. P. Collier Tuscaloosa

J. O. Finney Gadsden

J. Mac Barnes Montgomery

State Health Officer

D. G. Gill Montgomery

Delegates and Alternates to the American Medical Association

Delegate—J. Paul Jones Camden

Alternate—D. G. Gill Montgomery

(Term: January 1, 1958-December 31, 1959)

Delegate—E. Bryce Robinson Fairfield

Alternate—B. W. McNease Fayette

(Term: January 1, 1959-December 31, 1960)

PROGRAM

First Day, Thursday, April 9

Ball Room

Dinkler-Tutwiler Hotel

Morning Session

9:00 A. M.

Call to order by the President—

Edgar G. Givhan, Jr., Birmingham.

Invocation—

Address of Welcome—

S. Joseph Campbell, President, Jefferson County Medical Society.

PART I

REPORTS OF STANDING COMMITTEES

1. Public Relations—

Julius Michaelson, Chairman.

2. Medical Education and Hospitals—

Garber Galbraith, Chairman.

3. Medical Care for Industrial Workers—

E. Bryce Robinson, Chairman.

4. Insurance—

J. O. Morgan, Chairman.

5. Finance—

J. A. Brantley, Chairman.

6. Constitution and By-Laws—

J. M. Weldon, Chairman.

7. Indigent Care—

R. C. Berson, Chairman.

8. Legislation—

M. Vaun Adams, Chairman.

9. Rural Health—

Paul Nickerson, Chairman.

10. Disaster Committee—

Carlton Winsor, Chairman.

11. Veterans Affairs—

O. Emfinger, Chairman.

12. Maternal and Child Health—

J. H. French, Chairman.

13. Aging—

Jack Kirschenfeld, Chairman.

14. Building Committee—

Luther Hill, Chairman.

15. Cancer Control—

W. N. Jones, Chairman.

16. Mental Hygiene—

Frank A. Kay, Chairman.

17. Tuberculosis and Chronic Pulmonary Diseases—

W. J. Tally, Chairman.

SPECIAL COMMITTEES

1. American Medical Education Foundation—

H. G. Hodo, Chairman.

2. Blue Cross-Blue Shield—

H. S. Bartlett, Chairman.

3. A. M. A. Program Evaluation—

E. M. Moore, Chairman.

REPORTS OF OFFICERS

Secretary-Treasurer—

Douglas L. Cannon, Montgomery.

Executive Secretary—

W. A. Dozier, Jr., Montgomery.

Vice-Presidents—

(1) Southeastern Division

J. A. Brantley, Troy.

(2) Northwestern Division

W. D. Anderson, Tuscaloosa.

(3) Southwestern Division

E. L. Strandell, Brewton.

(4) Northeastern Division

W. E. White, Anniston.

The President's Message—

Edgar G. Givhan, Jr., Birmingham.

PART II

SCIENTIFIC PROGRAM

1. *The Office Management of Hypertension—*

WOOD S. HERREN,

Internist,

Birmingham, Alabama.

2. *Practical Shortcuts in Endocrinology, Diagnosis and Treatment—*

PETER H. FORSHAM,

Professor of Medicine and Chief of Endocrinology,

University of California Medical Center,

San Francisco, California.

PROGRAM OF THE ANNUAL SESSION

3. *The Diagnostic Value of Intravenous Cholangiography in Biliary Tract Disorders and Acute Abdominal Conditions—*

H. STEPHEN WEENS,
Chairman, Department of Radiology,
Emory University School of Medicine,
Atlanta, Georgia.

Afternoon Session

Thursday, April 9

2:00 P. M.

1. *Dietary Management of Children in Illness and in Health—*

FREDERIC G. BURKE,
Professor and Director, Department of Pediatrics,
Georgetown University Medical Center,
Washington, D. C.

2. *My Views on Surgery—*

HUGH E. GRAY,
Surgeon,
Anniston, Alabama

3. RECOGNITION OF FRATERNAL DELEGATES.

4. *Pruritus Vulvae—*

J. DONALD WOODRUFF,
Director of Obstetrical and Gynecological Pathology,
Johns Hopkins University School of Medicine,
Baltimore, Maryland.

5. *Student Health and the Student Health Service at the University of Alabama—*

JAMES B. McLESTER,
Internist,
University, Alabama.

6. *Seminar on Aging—*

JOSEPH F. A. McMANUS, Moderator,
Birmingham, Alabama.

Medical Aspects—

TINSLEY R. HARRISON,
Internist,
Birmingham, Alabama.

Surgical Aspects—

CHAMP LYONS,
Surgeon,
Birmingham, Alabama.

Psychiatric Aspects—

FRANK A. KAY,
Psychiatrist,
Birmingham, Alabama.

Second Day, Friday, April 10

Morning Session

Ball Room

9:00 A. M.

1. *Medical Show Window of the World—*

LOUIS M. ORR,
President-Elect,
American Medical Association,
Orlando, Florida.

2. *The Doctor and Voluntary Health Insurance Plans—*

MR. WILLIAM J. RUSHTON,
President, Protective Life Insurance Company,
Birmingham, Alabama.

3. WILLIAM CRAWFORD GORGAS AWARD.

4. RECOGNITION OF THE FIFTY YEAR CLUB.

5. THE JEROME COCHRAN LECTURE:

Somatopsychic Medicine—

SARA M. JORDAN,
Director Emerita, Department of Gastroenterology,
Lahey Clinic,
Boston, Massachusetts.

Afternoon Session

Friday, April 10

2:00 P. M.

1. *The Genghis Khan of the Bacterial World—*

THOMAS F. PAINE, JR.,
Internist,
Birmingham, Alabama.

2. *Prenatal Care—The Pale Pink Pill—*

LAWRENCE L. HESTER, JR.,
Professor of Obstetrics and Gynecology,
Medical College of South Carolina,
Charleston, South Carolina.

3. *The Treatment and Prevention of Decubitus Ulcers (Bed Sores)—*

LUTHER DAVIS, JR.,
Surgeon,
Tuscaloosa, Alabama.

4. *Clinical Inhalation Therapy—Demonstration—*

BEN V. BRANSCOMB,
Assistant Professor of Medicine,
Medical College of Alabama,
Birmingham, Alabama.

5. *An Appraisal of the Management of Hirschsprung's Disease—*

ARTHUR I. CHENOWETH,
Surgeon,
Birmingham, Alabama.

6. *Indoctrination Seminar—*

HAYNES C. BYRNE, Moderator,
Montgomery, Alabama.

Medical Organization—

DOUGLAS L. CANNON,
Secretary-Treasurer,
The Medical Association of the State of Alabama,
Montgomery, Alabama.

Competitors or Co-Workers—

T. BRANNON HUBBARD, SR.,
Past President,
The Medical Association of the State of Alabama,
Montgomery, Alabama.

The Second Mile—

MR. LEO E. BROWN,
Director, Communications Division,
American Medical Association,
Chicago, Illinois.

Last Day, Saturday, April 11

Ball Room

9:00 A. M.

Business Meeting of the Association sitting as the
Board of Health of the State of Alabama:

- (1) Report of the Board of Censors;

PROGRAM OF THE ANNUAL SESSION

- (2) Revision of the Rolls:
 - (a) County Societies,
 - (b) Counsellors,
 - (c) Correspondents;
- (3) Election and Installation of Officers.

Adjournment

✱ ✱ ✱

OTHER ITEMS

THE FIFTY YEAR CLUB

Class of 1959

(To whom Certificates of Distinction will be awarded on Friday morning immediately before the Jerome Cochran Lecture.)

William H. Abernethy.....	Troy
J. C. Anthony.....	Birmingham
John W. Black.....	Birmingham
David C. Byrne, Jr.....	Bellamy
Daniel J. Campbell.....	Dozier, RFD
William M. Carmichael.....	Greensboro, Rt. 3
James R. Chandler.....	Magnolia Springs
Spencer F. Cotton.....	Lexington
L. Orton Davenport.....	Birmingham
Nuckols T. Davie.....	Anniston
DeWitt Faucett.....	Gadsden
Walter Fudge.....	Lamison
Edward W. Gray.....	Florence
Samuel C. Hamner.....	Andalusia
R. Lee Hill.....	Haleyville
Edgar Poe Hogan.....	Birmingham
Roy E. Johnson.....	Birmingham
William F. Jordan.....	Huntsville
Isham J. Kimbell, Sr.....	Mobile
Irwin P. Levi.....	Anniston
Horace A. Leyden.....	Anniston
George F. Littlepage.....	Sheffield
William J. Lovett.....	Red Springs, N. C.
A. L. Stabler.....	Birmingham
Charles Watterston.....	Birmingham
Ferrin Young.....	Floral

✱ ✱ ✱

SCIENTIFIC EXHIBITS

Anyone who desires space for a scientific exhibit for the annual session of The Medical Association of the State of Alabama, Birmingham, April 9-11, is invited to write for information to Dr. C. L. Yelton, Lloyd Noland Hospital, Fairfield, Alabama.

✱ ✱ ✱

OTHER EVENTS

April 8, 1959

The Alabama Association of Obstetricians and Gynecologists

The Alabama Association of Obstetricians and Gynecologists will meet at 8:45 A. M. in the Terrace Ball Room, Tutwiler Hotel.

Alabama Pediatric Society

The Alabama Pediatric Society will meet at 10:00 A. M. at the Jewish Community Center. The speakers will be Dr. Robert B. Lawson, Professor of Pediatrics, University of Miami School of Medicine, Miami, Florida, and Dr. Frederic G. Burke, Professor, Director, Depart-

ment of Pediatrics, Georgetown University Medical Center, Washington, D. C.

Alabama Society of Internal Medicine

Dr. Elbert Persons, Durham, North Carolina, President of the American Society of Internal Medicine, will speak at a meeting of the Alabama Society of Internal Medicine at 3:00 P. M. at the Liberty National Life Insurance Company Auditorium.

At 6:30 P. M. a social hour and dinner meeting will be held at the Charcoal Steak House, Birmingham. Dr. Peter Forsham, Professor of Medicine and Chief of Endocrinology, University of California, San Francisco, California, will speak on "Catabolism and its Control."

Alabama Orthopaedic Society Crippled Children's Clinic

10:00 A. M. Registration.

Case presentations during the morning.

1:00 P. M. Business meeting.

2:00-4:30 P. M. Scientific program.

A social hour and dinner will follow for members and their wives.

Alabama Chapter

American College of Chest Physicians

The meeting will be held at the Tutwiler Hotel from 2:00-5:00 P. M.

April 10, 1959

Alabama Division

International College of Surgeons

There will be a breakfast and business meeting of the International College of Surgeons at 7:30 A. M. at the Tutwiler Hotel.

University of Tennessee

Alumni Association

A luncheon will be held at 12:00 noon at the Tutwiler Hotel.

SOCIAL EVENTS

Thursday, April 9, 1959

At 6:00 P. M. a barbecue will be given at Norwood Clinic.

The Lloyd Noland Hospital Alumni Dinner will be given on the same night.

Friday, April 10, 1959

The Presidential Dinner-Dance will be at Vestavia Country Club.

✱ ✱ ✱

PROGRAM OF THE WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Redmont Hotel

April 9-10, 1959

OFFICERS

President

Mrs. H. Leon Rosen.....Montgomery

President-Elect

Mrs. George W. Newburn, Jr.....Mobile

PROGRAM OF THE ANNUAL SESSION

Vice-Presidents

Mrs. John T. Morris.....	Cullman
Mrs. Philip Fagan.....	Anniston
Mrs. James DuBois.....	Enterprise
Mrs. William E. Purvis III.....	Mobile

Recording Secretary

Mrs. Kermit Pitt.....	Decatur
-----------------------	---------

Corresponding Secretary

Mrs. William L. Smith.....	Montgomery
----------------------------	------------

Treasurer

Mrs. Chester Beck.....	Troy
------------------------	------

Finance Officer

Mrs. J. O. Colley, Jr.....	Troy
----------------------------	------

Auditor

Mrs. Charles F. Lewis.....	Birmingham
----------------------------	------------

Historian

Mrs. Arthur M. Freeman.....	Birmingham
-----------------------------	------------

Parliamentarian

Mrs. G. G. Woodruff.....	Anniston
--------------------------	----------

Directors

Mrs. John F. Holley.....	Floral
Mrs. William Noble.....	Fort Payne
Mrs. J. G. Daves.....	Cullman

COMMITTEE CHAIRMEN

A. *Sponsored by Woman's Auxiliary, American Medical Association:*

American Medical Education Foundation—Mrs. J. O. Brooks, Hamilton.

Bulletin—Mrs. J. M. Kimmey, Elba.

Civil Defense—Mrs. I. W. Bankston, Scottsboro.

Legislation—Mrs. Joe Campbell, Birmingham.

Mental Health—Mrs. John Chenault, Decatur.

Nurse Recruitment—Mrs. L. H. Clemmons, Cullman.

Organization—Mrs. G. W. Newburn, Jr., Mobile.

Program—Mrs. P. A. Bryant, Bay Minette.

Public Relations—Mrs. Hugh Praytor, Montgomery.

Safety—Mrs. William Noble, Fort Payne.

Today's Health—Mrs. W. A. Cunningham, Birmingham.

B. *Sponsored by Woman's Auxiliary, Southern Medical Association:*

Councilor to Southern—Mrs. William Noble, Fort Payne.

Doctor's Day and Research and Romance of Medicine—Mrs. William Noble, Fort Payne.

C. *Sponsored by Woman's Auxiliary, Medical Association of the State of Alabama:*

Archives and Exhibits—Mrs. W. D. Anderson, Tuscaloosa.

Lettie Daffin Perdue Scholarship—Mrs. A. D. Henderson, Mobile.

Members-at-Large—Mrs. E. F. Leatherwood, Hayneville.

Co-Chairman—Mrs. J. A. Sherrod, Hayneville.

Memorial—Mrs. Jack Clayton, Birmingham.

Newsletter—Mrs. William Brock, Montgomery.

Press and Publicity—Mrs. W. O. Romine, Birmingham.

Co-Chairman—Mrs. George Peters, Montgomery.

Revisions—Mrs. W. G. Thuss, Birmingham.

Rural Health—Mrs. Joe Cromeans, Scottsboro.

Yearbook—Mrs. J. H. Farrior, Montgomery.

Nominating—Mrs. William Noble, Fort Payne.

Essay Contest—Mrs. W. J. Rosser, Birmingham.

Handbook—Mrs. John Chenault, Decatur.

D. *For Convention:*

Chairman—Mrs. S. B. Word, Birmingham.

Archives and Exhibits—Chairman, Mrs. W. D. Anderson, Tuscaloosa.

Press and Publicity—Mrs. W. O. Romine, Birmingham.

Thursday, April 9

8:30 A. M.-4:30 P. M.—Registration.

9:00 A. M.—Preconvention Executive Board Meeting, Mrs. H. Leon Rosen, President, Presiding, Redmont Hotel.

1:00 P. M.—Dutch Luncheon, Redmont Hotel, Mrs. H. Leon Rosen, Presiding. Honoring Mrs. E. Arthur Underwood, President, Woman's Auxiliary to the American Medical Association and Mrs. George W. Owen, President, Woman's Auxiliary to the Southern Medical Association.

Invocation.

Welcome—Mrs. John E. Kent, Birmingham.

Response.

Greetings from The Medical Association of the State of Alabama—Dr. Edgar G. Givhan, Birmingham.

Greetings from Woman's Auxiliary to the Southern Medical Association—Mrs. George W. Owen, Jackson, Mississippi.

Address—Dr. Robert C. Berson, Dean, Medical College of Alabama, Birmingham.

2:30 P. M.—First General Session, Redmont Hotel.

Call to Order—Mrs. H. Leon Rosen, President, Montgomery.

Invocation—Mrs. G. G. Woodruff, Anniston.

Membership Pledge.

Welcome—Mrs. H. Leon Rosen, Montgomery.

Introduction of Guests—Mrs. H. Leon Rosen, Montgomery.

Convention Rules of Order—Mrs. S. B. Word, Birmingham.

First Report of Credentials Committee—

Report of Reading Committee—Mrs. Kermit Pitt, Decatur.

Message—Dr. Douglas L. Cannon, Secretary-Treasurer, The Medical Association of the State of Alabama, Montgomery.

Annual Reports of Officers.

Annual Reports of County Presidents:

Northeastern District—Mrs. Philip Fagan, Anniston.

Blount—Mrs. V. E. Whitehead, Blountsville.

Calhoun—Mrs. Thomas Bridges, Anniston.

DeKalb—Mrs. C. D. Killian, Fort Payne.

Etowah—Mrs. T. M. Owens, Attalla.

Jackson—Mrs. E. Julian Hodges, Scottsboro.

Madison—Mrs. J. Earl Robertson, Huntsville.

Marshall—Mrs. John W. Boggess, Guntersville.

Talladega—Mrs. John D. Pitchford, Sylacauga.

Northwestern District—Mrs. John T. Morris, Cullman.

Colbert—Mrs. Russell Trapp, Tuscumbia.

Cullman—Mrs. E. B. Barnes, Cullman.

Jefferson—Birmingham—Mrs. John E. Kent, Birmingham.

Jefferson—Bessemer—Mrs. Hugh Ford, Bessemer.

Lauderdale—Mrs. Harry M. Simpson, Jr., Florence.

Marion—Mrs. William E. Metzger, Hamilton.

PROGRAM OF THE ANNUAL SESSION

Morgan—Mrs. Kermit Pitt, Decatur.
Pickens—Mrs. William Hill, Carrollton.
Tuscaloosa—Mrs. J. D. Lord, Tuscaloosa.
Walker—Mrs. Gaines W. Keith, Carbon Hill.

Memorial Service—Mrs. Jack Clayton, Birmingham.

Friday, April 10

8:30 A. M.—12:30 P. M.—Registration.

9:00 A. M.—Second General Session, Redmont Hotel.

Call to Order—Mrs. H. Leon Rosen, Montgomery.

Invocation.

Introduction of Guests.

Second Report of Credentials Committee.

Minutes—Mrs. Kermit Pitt, Recording Secretary, Decatur.

Message—Mr. W. V. Wallace—Executive Assistant, The Medical Association of the State of Alabama, Montgomery.

Annual Reports of County Presidents (Continued):

Southeastern District—Mrs. James DuBois, Enterprise.

Coffee—Mrs. J. E. Pittman, Enterprise.

Covington—Mrs. J. C. Hurst, Opp.

Elmore—Mrs. Winston Edwards, Wetumpka.

Geneva—Mrs. W. G. Paul, Geneva.

Houston—Mrs. Harmon Stokes, Dothan.

Montgomery—Mrs. R. M. Lightfoot, Montgomery.

Pike—Mrs. T. D. Cowles, Troy.

Southwestern District—Mrs. William E. Purvis, III, Mobile.

Baldwin—Mrs. Robert H. Johnson, Fairhope.

Clarke—Mrs. P. H. Warren, Jackson.

Conecuh-Monroe—Mrs. Cecil Price, Evergreen.

Dallas—Mrs. R. Nelson Long, Selma.

Escambia—Mrs. F. M. Phillippi, Brewton.

Mobile—Mrs. Dixon Meyers, Mobile.

Recommendations from the Executive Board.

Presentation of Budget for 1959-60—Mrs. J. O. Colley, Jr., Finance Officer, Troy.

Recognition.

New Business.

Announcements.

Report of Nominating Committee—Mrs. William Noble, Fort Payne.

Election of Officers.

Election of Nominating Committee.

Election of Delegates to National Convention.

Final Report of Credentials Committee.

Installation of Officers—Mrs. E. Arthur Underwood, President, Woman's Auxiliary to the American Medical Association, Vancouver, Washington.

Presentation of President's Pin and Gavel.

Presentation of Past-President's Pin.

Introduction of Committee Chairmen for 1959-60—Mrs. George W. Newburn, Jr., Mobile.

Adjournment.

1:00 P. M.—Luncheon at Vestavia Country Club.

Honoring Mrs. E. Arthur Underwood, President, Woman's Auxiliary to the American Medical Association. Hosts, Jefferson County Medical Auxiliary, Mrs. John E. Kent, Presiding.

Invocation.

Achievements Awards.

Introduction of Guests and New Officers.

Address—Mrs. E. Arthur Underwood.

Fashion Show.

Adjournment—Mrs. H. Leon Rosen, Montgomery.

Following immediately, Postconvention Executive Board Meeting, Vestavia Country Club.

CONVENTION RULES OF ORDER

1. There will be a registration fee to include Friday's luncheon.

2. All persons appearing on program shall be seated in a reserved section at front of room.

3. Members of the voting body shall wear badges at all sessions of the convention.

4. When addressing the chair, the member shall rise, give name, and the name of county Auxiliary.

5. Unless notified to the contrary, each speaker shall be limited to two minutes and may not speak more than twice on any one question.

6. A timekeeper will notify each speaker when two minutes are up.

Boys Ranch Founder Lists Child Rearing Principles—

A boy needs parents, not push-overs, according to Cal Farley, founder of Boys Ranch at Amarillo, Texas.

The principles of rearing a boy are "deceptively simple. Maybe that's why they are so easily forgotten—or not properly learned," Farley said in the January Today's Health, published by the American Medical Association.

Boys Ranch accommodates 220 youngsters and is expanding its facilities for another 500. In 20 years, 1500 boys—most from homes broken by family trouble or death—have lived at the ranch. About 40 per cent of the boys were in some kind of trouble with the law and the others were headed that way.

Only 37 boys were failures, Farley said. The ranch has no special disciplinary staff member. Every adult has authority over a boy while with him.

"This way, the boy learns to respect and obey all adults. Equally important, when a boy steps out of line we correct him immediately," Farley said. "Just keep boys on the beam, supervise and teach them until they finally understand and they'll turn out okay."

Farley listed the five guiding rules for rearing boys at Boys Ranch. They are:

—Teaching the boy to obey. This is the most difficult job and the most important. When a child is allowed to set his own rules he will grow up without any rules at all.

—Living with the boy. By helping him to enjoy his youth, he can be shown how his boyhood years can be used to equip himself for manhood.

—Being specific with the boy. Adults should let him know where they stand—and therefore where he stands. Then he is not confused by doubt, uncertainty, or conflict.

—Giving him responsibility. By making a boy feel part of the working team at the ranch (or at home), he will understand how to be part of the team in whatever sphere of life he enters.

—Loving him. The boy must be shown that love can't be measured by what one gets or gives but in how one conducts himself. It is a kind of mutual respect.



ASSOCIATION FORUM

STATE COMPLETES SURVEY OF MEDICAL AND HOSPITAL TREATMENT OF ALCOHOLICS

JOHN L. SANDERS

EDUCATIONAL DIRECTOR

COMMISSION ON ALCOHOLISM, STATE OF ALABAMA

Private physicians and staffs of general hospitals in Alabama are confronted, in a very significant way, by alcoholism, according to the results of a comprehensive survey conducted last summer by two University of Alabama professors for the Alabama Commission on Alcoholism.

All of the 998 physicians in the state in the fields of general practice, internal medicine, psychiatry, and pulmonary disease were contacted through means of questionnaires and/or personal interviews. In addition, all 129 member-hospitals of the Alabama Hospital Association were sent questionnaires or contacted through personal interviews. The rate of questionnaire return was exceedingly high from both physicians and hospital administrators, reflecting a high degree of interest in the alcoholic problem. The cooperation of the State Medical Association and the Alabama Hospital Association contributed greatly to the interest of respondents and the subsequently high rate of return.

Slightly over 600 physicians, or 62 per cent of those queried, reported contacts with 9,251 alcoholic patients in 1957. If the return is extrapolated to include the physicians not responding, it appears that approximately 15,000 alcoholics were contacted by physicians in 1957. This is roughly one-third of the estimated alcoholic population in the state—a very significant proportion. Only 43 of the responding physicians indicated no contacts with patients having drinking problems.

Of the 104 hospital administrators responding to the questionnaire, 68 indicated that about 1500 patients were admitted with a primary diagnosis of alcoholism. This figure does not take into account the large number of alcoholic patients admitted by many hospitals under a diagnosis other than alcoholism.

It is extremely doubtful that very many of the alcoholics contacted by the physicians, or admitted

to the general hospitals, recognized the fact they had a serious drinking problem. (It is assumed that most of these cases were serious or they would not have been detected due to the fact alcoholics generally tend to hide their drinking problem.) However, physicians appear to be in an admirable position to make the patients aware of their alcoholic problem. They are also in a unique position to motivate the alcoholic to do something about the drinking problem itself.

Moreover, physicians, in many instances, observe the drinking problem in its incipient stages. This points to the significant possibility of subjecting the alcoholic to treatment before his pattern of excessive drinking progresses to the point where he experiences loss of control. The potentiality for recognition of the illness in its early stages of development and for the prevention of its progressive development should not be overlooked. It is a key factor in a program of control.

Few physicians have any specialized knowledge or training with respect to the treatment of alcoholics. Moreover, the average practitioner cannot afford to devote to such patients the time required by intensive therapeutic methods. Despite the existence of these drawbacks, the responding physicians evidenced a high degree of willingness to extend long-term treatment, especially to regular patients. Over 42 per cent of the respondents indicated a willingness both to sober up and to treat acutely intoxicated individuals, although most of them expressed a preference for their regular patients.

On the other hand, while 33 per cent of the responding practitioners provided treatment to patients judged to be chronic alcoholics, only 16 per cent made extensive treatment available to this category. Where habitual drinking was seen as a related factor, nearly 56 per cent of the respondents attempted to treat both the illness and the drinking complication. But 30 per cent of them recognized the need for specialized help and referred their patients elsewhere for the drinking complication. Psychiatrists and Alcoholics Anonymous were mentioned as the two most frequently used resources for referral, while psychiatrists

were slightly more popular with physicians who attempted no treatment of chronic alcoholics.

The wishes of the staff physicians of general hospitals appeared to be the decisive factor as to whether alcoholics were admitted to hospitals with a primary diagnosis of alcoholism. Fifty one of 94 hospital administrators indicated that they would admit such patients as often as the staff physicians recommended. Twenty administrators, however, stated that patients with this diagnosis would not be admitted under any circumstances. Acutely intoxicated alcoholics are not as welcome as non-intoxicated alcoholics in general hospitals, but a large majority of the hospitals indicated they would admit acutely intoxicated patients for emergency care only or when there was a complicating illness.

Although 42 hospitals reported staff personnel specifically trained in techniques for handling alcoholic patients, only six hospitals listed trained personnel other than registered nurses, practical nurses and attendants or orderlies. None of these six mentioned the availability of psychiatrically trained personnel.

The survey reveals that alcoholic patients were a part of the caseload of most physicians, irrespective of the number of years of practice. Doctors with varying years of practice all reported a remarkably similar number of alcoholic patient contacts. The fact that a majority of the state's physicians regularly encounter these patients, and realize the difficulty in treating them, probably accounts for the fact that over 140 responding physicians wrote comments at the end of their questionnaires. Ninety-two of them either expressed a favorable attitude toward the present state alcoholism program or recognized the need for expanded treatment facilities. Only eleven registered comments reflecting an unfavorable opinion of this type of program.

Also, it was quite encouraging to note that 52 hospital administrators indicated on their questionnaires that they would personally encourage certain hospital personnel to attend special courses on the treatment and care of alcoholics. Sixty-nine said they would personally encourage the establishment of local treatment facilities for alcoholics.

The Commission's staff is extremely pleased with the results of the survey, the efficiency with which it was conducted, the cooperation of the Alabama Hospital and State Medical Associations, and the exceptionally good response of the physicians and hospital administrators who were contacted. We feel that the results fully validate the Commission's original assumption in undertaking this comprehensive study—namely, that private physicians and general hospitals are essential resources for

any widespread and comprehensive treatment program for alcoholics, and any effective state treatment and education program must be oriented toward this fact.

The Commission now has the basic data to allow it to work more closely with these traditional treatment resources and at the same time chart its future program more intelligently.

Copies of the survey, *Medical and Hospital Treatment of Problem Drinkers in Alabama*, or of the study, *The Incidence of Alcoholism in Alabama*, may be obtained free of charge by writing Educational Director, Commission on Alcoholism, 704 Washington Avenue, Montgomery 4.

Men Are More Successful than Women at Dieting—

Men are more successful at losing weight than women, a new review of medical reports shows.

Writing in the January Archives of Internal Medicine, published by the American Medical Association, Dr. Albert Stunkard and Mavis McLaren-Hume, M. S. said, "Sex of the patients has not, to our knowledge, been previously suggested as a possible factor in the success of efforts at weight reduction.

"We were, therefore, surprised to discover that whenever results of treatment have been reported according to sex of the patient, men have been shown to be more successful than women."

In three separate studies "a far higher percentage of men than women were able to achieve the modest success of a 20-pound weight loss." The discrepancy between the results of treatment for men and for women is even more pronounced if 40 pounds is considered as a criterion of success, the authors said. They offered no reason for the success of men.

At least three other possible criteria for predicting success have been suggested. They are the presence of the "night-eating syndrome," in which the patient eats at night; the outcome of previous attempts at dieting, and the amount of anxiety in the patient.

The authors found in a review of the literature and in a study of 100 patients at New York Hospital that none of these had any validity as indications of success at weight reduction.

In commenting on the treatment of obesity, the authors said, "In recent years the ill effects ascribed to excessive body weight have received wide attention, as have the benefits to be achieved by weight reduction.

"As a result many physicians and their patients, who had formerly looked upon weight reduction as a cosmetic conceit, have come to consider it a therapeutic imperative. A variety of lay institutions, notably the magazines for women, has seized upon this growing interest in weight reduction and has helped to magnify it to the proportions of a national neurosis."

They noted that weight reduction is a very difficult business. For success to occur, patients and physicians alike must give up the naively optimistic idea that weight reduction will occur as a matter of course once treatment is begun and realize that treatment is more than just prescribing and following a diet.

When treatment for obesity is undertaken, it must be conducted by a qualified physician and not by non-medical persons.



MEDICAL CENTER NEWS

WHAT IS A MEDICAL CENTER?

A Medical Center is a powerful force protecting people against sickness and disease. It brings together three great traditional vocations—patient care, education and research. It combines the compassion of a hospital with the intellectual stimulation of schools of medicine and dentistry and nursing, and the zealous questioning to be found in many laboratories. It unites, as members of the health team, physicians, dentists, nurses, anesthesiologists, medical, dental and x-ray technicians, medical record librarians, health educators, research fellows and assistants, psychologists, medical social workers, dietitians, and physical, occupational and speech therapists.

A Medical Center is also a place where the whole man is the first concern. In its hospital, the skills of the great surgeon and the learned physician are supplemented by the healing hands of the nurse. In its classrooms, the anatomist and the physiologist open the door to clinical medicine and nursing. And in its laboratories, both the microscope and the calculating machine reveal to the trained scientist the complicated organism that is man.

A Medical Center is also a door to the future. Here children are born, doctors, dentists and nurses are educated, and the causes of disease are discovered. It is the most important structure yet developed by modern man for his future security and happiness. As such it merits everyone's understanding and support.

VICE PRESIDENT'S MESSAGE

An old year has ended—a new year has begun. It is fitting, at this time, to pause for a few moments to review some of the things accomplished by the Medical Center in this past year, and then to set our sights anew on what we hope to accomplish in the year to come.

January 1958 brought the beginning of construction on the Research Building which is going along on schedule. The building should be completed by September 1959, and will not only provide urgently needed space for research now being conducted in congested quarters but will also permit the assignment of some badly needed space to the hospital. There has been a phenomenal growth of research within the Medical Center; in 1948 the annual value of gifts and grants for research and

training to the Center was approximately \$30,000. As of today, this amount has increased to approximately \$1,000,000 a year.

A distinguished array of state and national speakers took part in the dedication of the Lawrence Reynolds Library in February 1958. Dr. Reynolds gave the Medical Center his magnificent collection of rare medical books and other historical items, valued in excess of one-half million dollars. It consists of over 4,500 volumes in all sizes and languages, including many rare and first editions, and also contains manuscripts, original letters, paintings and sculptured art. We were indeed fortunate to be the recipients of so magnanimous a donation.

Dr. Frank A. Rose took office as President of the University of Alabama and was inaugurated at impressive ceremonies at the University campus in April.

The year 1958 also saw 68 physicians, 40 dentists, 44 nurses, and 17 technologists complete their training and move on to the next stage of their promising careers. All of us have just cause to be proud of the high quality of each of these fine people as they join the ranks of those working to improve the health of their fellow men.

Future growth of the Medical Center was assured with the transfer, in June, of a deed to the 10½ block expansion area. This was a tremendous step forward in the advancement of health for the people of Alabama, made possible by the efforts of the Medical Center Advisory Board, the Board of Trustees, the Birmingham City Commission, the Birmingham Housing Authority, the Governor, the Legislature, and the voters of Alabama. This area will provide space for expansion for many years to come. Since our acquisition of this large tract of land, we have sold a block of it to The Children's Hospital of Birmingham so that it may build its new hospital and out-patient clinic within the bounds of the Medical Center area.

In October, Dr. Richard T. Eastwood joined our team as Executive Director of University Affairs-Birmingham in order to make effective decentralization of normal administrative matters and preserve effective coordination of our activities here with the general policies and objectives of the University.

To honor a distinguished physician, teacher and

investigator, 1958 brought the establishment of the Tinsley Randolph Harrison Lectureship. The lectureship, which will occur each fall, was made possible through the contributions of the many friends, students and associates of Dr. Harrison, and the first lecture was given by Dr. William Dock in November.

Another annual event took place for the first time in November when we were hosts for the first general medical and clinical program for our alumni and friends. We welcomed guests not only from Alabama but from several surrounding states, and were delighted with the response to this milestone in our progress.

With the enlargement and complete renovation of our Oral Surgery Department, it now takes its place as one of the largest in the nation, with facilities for handling approximately 100 patients each day.

The building which served so long as Dr. Gus's Restaurant was converted into very fine teaching space for the School of Nursing.

Remodeling of the seventh floor of the Hillman Building has produced a very fine cardiovascular facility. We are looking forward to equipping this facility and activating the program that will produce one of the most modern centers in the nation for the study and treatment of patients whose problems are related to the heart and great blood vessels.

All through the year the hospital continued to make progress in remodeling and improving many areas, but a great many more areas and functions still need improvement. The hospital did manage so effectively to serve 25,000 patients during the year that it ranks as one of the thirty busiest hospitals in the country, in spite of the fact that support from local and state government is still desperately small.

The Medical Center Advisory Board continues its active interest and concern and is now addressing itself to ways and means for getting financial support for the operation of the hospital as well as capital funds for the renovation of the hospital, the construction of the nurses' residence, and taking the other steps in the next phase of the long-range plans for the Medical Center.

Our architects are now busy on plans for the new psychiatric clinic building. We are impatient to get ahead with the new residence for nurses, in which we plan provisions for at least 240 more than the 160 students we can now accommodate.

Nineteen fifty eight brought much fine progress, but a great deal more remains to be accomplished in the immediate future. It is our earnest prayer that, with the continued efforts of all of the people in the Medical Center, the community and the state, 1959 will bring us closer to the objective of

providing the basic elements for the future health of all the people of the state.

ROBERT C. BERSON, M. D.
VICE-PRESIDENT

SCHOOL OF NURSING HOLDS OPEN HOUSE

The School of Nursing held open house at its new quarters recently and more than 200 persons visited its new home. Actually, the nursing school is not wholly new since it was formerly Dr. Gus' drive-in restaurant which has been remodeled and attractively decorated. Mrs. Kathryn Crossland, Director of Nursing at the Medical Center, said the building has about 8000 square feet of floor space. The largest classroom will accommodate 100 students.

"The school's capacity is presently 160 students," Mrs. Crossland said. "We hope to get enough money this year through the Hill-Burton Act to construct a 300-bed nurses' residence so that the nursing school can be expanded."

NIH SURVEY TEAM VISITS MEDICAL COLLEGE

The National Institutes of Health is completing a survey of various medical schools in the country for the purpose of evaluating federal participation in financing medical research and training.

The Medical College was one of those selected for this study and Dr. Ralph E. Knutti and Dr. Herbert Rosenberg of NIH recently completed a two-day stay here for this purpose. During this time, they met with Dr. Robert C. Berson, Vice President for Health Affairs and Dean of the Medical College, and with various departmental chairmen and staff members who are actively engaged in carrying out research programs.

Areas covered in the study were the impact on medical schools of federal funds in support of medical research and training reflected by changes in income and pattern of expenditure, faculty and staff, or organization and curriculum; an appraisal of NIH mechanisms for support of research and training and discussion of possible changes; and discussion of the school's objectives for the next decade and how these objectives can be accomplished.

FACULTY MEMBERS TO PRESENT ENTIRE PROGRAM AT MASSACHUSETTS DENTAL SOCIETY MEETING



Dr. Volker

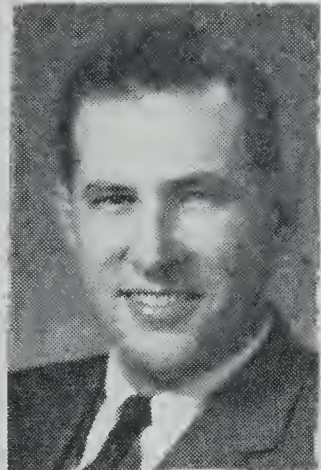
Dr. Joseph F. Volker, Professor of Dentistry and Dean of the School of Dentistry and four members of his staff, have been invited to present the entire program at the three-day meeting of the Massachusetts Dental Society to be held at the Hotel Statler in Boston in mid-January.



Dr. Robinson



Dr. Finn



Dr. Sharry

Other members of the faculty who will participate are: Dr. Leonard Robinson, Professor of Dentistry; Dr. Sidney B. Finn, Professor of Dentistry; Dr. John J. Sharry, Associate Professor of Dentistry; and Dr. Charles A. McCallum, Jr., Associate Professor of Dentistry and Chairman of the Department of Oral Surgery.

"We are all looking forward to this trip," said Dr. Volker. "All of us studied, taught, or received part of our training in this part of the country and it will be very pleasant, not only to conduct this program but to renew old friendships."

Dr. Volker will speak on "Dentistry in the Year 2000" and also on "The Roll of the Dental School in a Medical Center." He will also speak at the luncheon on the last day of the meeting. Dr. Robinson will talk on "Therapeutic Agents and Operative Procedures" and "Oral Neoplasms." Dr. Finn will discuss "Interceptive Orthodontics" and "Treatment of Fractured Teeth." Dr. Sharry's topics will be "Occlusal Patterns and Occlusions Patterns" and "Inter-Denture Relationships." Dr. McCallum's subjects will be "Man-



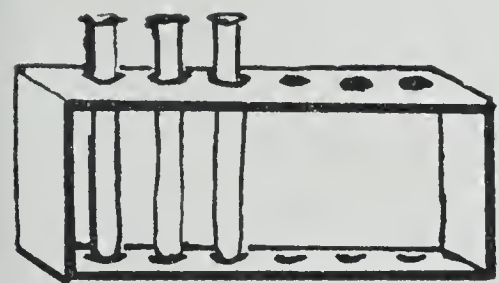
Dr. McCallum

agement of the Dental Patient with Systemic Disease" and "Oral Manifestations of Systemic Disease."

While in New England, Dr. Finn will also speak at the Rhode Island State Dental Society meeting, in Providence, on the subject "What the General Practitioner Should Know About Preventive Orthodontics."



Medical Seminar Is Great Success. Shown greeting each other during registration for the First General Medical Program for Alumni and Friends of the Medical Center, are, left to right, Dr. Frank A. Rose, President of the University; Dr. Robert C. Berson, Vice President of the University for Health Affairs; Dr. J. Henry Goode, President of the Medical Alumni Association of Alabama; and Dr. Emmett B. Carmichael, Chairman of Arrangements. Medical people from Alabama, Florida, Georgia and North Carolina attended this meeting.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

POISON CONTROL CENTERS

The first city-wide poison control center in the United States was established in Chicago in 1953. Today, there are over 40 such centers in the country, and one state, Florida, has a network of centers which are centrally directed and coordinated. Alabama's five poison control centers are located at the University Hospital, Birmingham; Providence Hospital, Mobile; Eliza Coffee Hospital, Florence; Athens-Limestone Hospital, Athens; and the Anniston Hospital, Anniston. Continued growth of and interest in these centers is indicated

by the formation last fall of the American Association of Poison Control Centers.

The American Academy of Pediatrics pioneered in the establishment of poison control centers. The Academy's longstanding interest in poison control measures stemmed from the fact that a large percentage of the victims of accidental poisoning are young children. In Alabama, 34 deaths from accidental ingestion of poison were reported in 1957. Fourteen of these victims were three years of age or younger and one was seven years old. For every fatal case, there are doubtless hundreds of poisonings which do not result in deaths.

The Academy could also cite another reason for its concern: The increasing household use, and, therefore, increasing accessibility to children, of

synthetic products containing toxic substances. New varieties of pesticides were and are of particular concern. One of the major functions of poison control centers, therefore, has been the compilation of information on products that are potential poisoners.

Although details of structure and organization of poison control centers vary according to the needs of the community, the general pattern is the same. The poison control center maintains a comprehensive file of information as to the content of various potentially toxic products, together with recommended antidotes and treatments, and a library of standard reference works on poisons. The center is staffed 24 hours a day so that physicians who need information can be assured of getting it at any time of day or night. The information is available only to physicians or their authorized representatives.

In metropolitan areas and state-wide programs a new trend in organization is becoming apparent. In these areas there is a centrally located poison information center at which all information is kept in a readily accessible manner. Poison treatment centers are located at strategic points throughout the area. Such a system avoids duplication of files since treatment centers need to keep no extensive files and will probably need only basic reference works relative to poisons and poisonings. Furthermore, poison victims can be treated at the center nearest their homes, effecting a time saving which can be of great importance in poison cases. The Jefferson County poison control program is organized in this manner. The Poison Information Center is located at the University Hospital and treatment centers are located in 10 hospitals at points throughout the county. This program is sponsored by the Jefferson County Medical Society.

Many poison control centers have also assumed responsibility for educational activities as well as treatment. Such education is usually carried out in the form of follow-up visits to the homes of poisoning victims. The person, often a public health nurse, who makes the follow-up visit checks on the condition of the victim and uses the visit as an opportunity to show how similar occurrences may be avoided through careful handling and safe storage of toxic materials. A home safety check list may be left at the time of this visit.

Some services for poison control centers have been developed since the first centers were established. The U. S. Public Health Service has organized a clearing house for poison control centers which not only serves to disseminate information but offers direct services as well. The clearing house will furnish a 500 card poison index on potentially toxic trade name household products and standard report forms to centers. Supplements to

the index are furnished at intervals. A bulletin containing newly acquired information about various products and plants, case reports, suggested research and similar material is mailed to all centers. The clearing house will provide consultant service to groups interested in establishing poison control centers as well as to centers already in operation. Requests for such services from the U. S. Public Health Service will be expedited if they are forwarded through the State Health Department. While there is certainly no objection to direct correspondence, the Public Health Service routinely clears such requests with the Health Department, so time will be saved if they are sent through that agency.

Poison control centers are already performing valuable services in every area where they are located. Apparently, there will be a greater demand for these services as more and more synthetic products become available for home use.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS AND COMPARATIVE DATA, OCTOBER 1958

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Causes of Death	Number Registered During October 1958			Rates* (Annual Basis)		
	Total	White	Non-White	1958	1957	1956
Live births	7359	4680	2679	27.1	26.7	27.5
Deaths	2206	1369	837	8.1	9.5	7.9
Fetal deaths	169	72	97	22.4	21.2	21.3
Infant deaths—						
under one month	161	86	75	21.9	22.6	18.9
under one year	223	101	122	30.3	32.9	26.8
Cause of Death						
Tuberculosis, 001-019	28	15	13	10.3	8.2	7.5
Syphilis, 020-029	5	—	5	1.8	3.4	3.0
Dysentery, 045-048	2	—	2	0.7	0.7	0.4
Diphtheria, 055	—	—	—	—	0.4	0.7
Whooping cough, 056	1	1	—	0.4	—	0.4
Meningococcal infections, 057	—	—	—	—	1.9	1.1
Poliomyelitis, 080, 081	—	—	—	—	0.4	0.7
Measles, 085	—	—	—	—	—	—
Malignant neoplasms, 140-205	281	192	89	103.6	120.7	111.7
Diabetes mellitus, 260	29	23	6	10.7	13.4	13.4
Pellagra, 281	1	1	—	0.4	0.4	—
Vascular lesions of central nervous system, 330-334	270	172	98	99.6	118.1	103.1
Rheumatic fever, 400-402	1	—	1	0.4	0.7	2.2
Diseases of the heart, 410-443	734	483	251	270.7	306.3	258.6
Hypertension with heart disease, 440-443	133	63	70	49.0	56.3	52.3
Diseases of the arteries, 450-456	50	32	18	18.4	21.6	13.4
Influenza, 480-483	5	2	3	1.8	16.4	3.4
Pneumonia, all forms, 490-493	46	30	16	17.0	32.8	20.9
Bronchitis, 500-502	2	1	1	0.7	2.6	1.5
Appendicitis, 550-553	3	2	1	1.1	1.1	1.5
Intestinal obstruction and hernia, 560, 561, 570	5	2	3	1.8	6.0	3.4
Gastro-enteritis and colitis, under 2, 571.0, 764	23	2	21	8.5	2.6	4.1
Cirrhosis of liver, 581	20	16	4	7.4	8.2	3.4
Diseases of pregnancy and childbirth, 640-689	9	1	8	12.0	5.5	5.3
Congenital malformations, 750-759	35	22	13	4.8	5.0	3.7
Immaturity at birth, 774-776	40	22	18	5.4	6.8	5.0
Accidents, total, 800-962	162	117	45	59.8	61.5	61.6
Motor vehicle accidents, 810-835, 960	81	59	22	29.9	36.1	31.4
All other defined causes	333	179	154	122.8	154.2	124.5
Ill-defined and unknown causes, 780-793, 795	121	54	67	44.6	48.4	28.4

Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director
SPECIMENS EXAMINED

December 1958

Examinations for diphtheria bacilli and Vincent's	204
Agglutination tests	480
Typhoid cultures (blood, feces and urine)	453
Brucella cultures	5
Examinations for malaria	11
Examinations for intestinal parasites	2,422
Darkfield examinations	6
Serologic tests for syphilis (blood and spinal fluid)	21,804
Examinations for gonococci	1,377
Examinations for tubercle bacilli	3,379
Examinations for Negri bodies (smears and animal inoculations)	128
Water examinations	1,890
Milk and dairy products examinations	4,063
Miscellaneous examinations	632
Total	36,854

* * *

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director

CURRENT MORBIDITY STATISTICS

1958

	Nov.	Dec.	E. E.* Dec.
Typhoid and paratyphoid	8	8	3
Undulant fever	2	0	0
Meningitis	12	11	12
Scarlet fever	88	90	79
Whooping cough	2	5	31
Diphtheria	9	15	23
Tetanus	2	3	3
Tuberculosis	164	149	158
Tularemia	0	0	0
Amebic dysentery	0	2	1
Malaria	0	0	1
Influenza	96	60	302
Smallpox	0	0	0
Measles	75	78	103
Poliomyelitis	18	6	10
Encephalitis	1	2	1
Chickenpox	25	40	204
Typhus fever	0	1	1
Mumps	40	20	106
Cancer	373	336	423
Pellagra	0	0	0
Pneumonia	197	207	216
Syphilis	84	89	126
Chancroid	1	6	5
Gonorrhea	265	206	290
Rabies—Human cases	0	0	0
Positive animal heads	14	10	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

At least one out of every 200 Americans has epilepsy in "mild or severe form," according to the current issue of *Patterns of Disease*, prepared by Parke, Davis & Company for the medical profession.

The disease is cited as "a major health problem," occurring as often as diabetes or active tuberculosis and four times more often than polio.

Further, about six in 100 Americans have "some sort of convulsive episode at some times in their lives."

Estimated number of persons suffering from epilepsy varies from 640,000 to 1,700,000 but the actual incidence is not known, for the epileptic person "hesitates to reveal his affliction because of social attitudes regarding epilepsy."

Rules Listed for Giving Medicine to Children—Giving medicine to a stubborn child is like any other "do-it-yourself" home project.

A Norfolk, Va., pediatrician, Dr. Forrest P. White, listed in the December *Today's Health*, an American Medical Association publication, some rules and techniques for giving medicine to children.

His general rules are:

—Plan the procedure first. Have all equipment within reach. If two adults are involved, decide what each will do.

—Put the medicine bottle where the child can't knock it over, especially if it is expensive.

—Assume from the first that you are going to succeed. This conviction alone may persuade the child that he may as well cooperate.

—Don't let your child's excitement infect you. Keep calm. If you feel anger, don't show it. Just keep talking to the child calmly and soothingly, even when he's yelling his head off.

—When a liquid medicine is given and the child vomits afterward, wait till he calms down and then repeat it. Usually it will stay down the second time.

Dr. White said that when two parents work together—or gang up from the child's point of view—the father holds the child on his lap and holds the child's wrists, while the mother steadies the child's head and forces his mouth open.

When only one parent gives the medicine, he holds the child on his lap with the child's legs between his knees. The child's left arm is kept behind the parent's back and the parent uses his right hand to hold the child's right elbow so the arm is above the head. The child's head is held against the parent's body and child's upraised right arm.

Dr. White recommended that when forcing medicine, it is often best to give only half a teaspoonful at a time.

For the unusually rambunctious youngster, he suggested pouring half a teaspoonful into each of two spoons, putting them on the table, returning the bottle to the shelf and then getting the child.

The spoon should be placed on the tongue and held there, tipping it to pour a small amount at a time onto the back of the tongue. As long as the spoon is held in place, the child can't spit the medicine out and has no choice but to swallow, Dr. White said.

Almost any child resisting medicine will open his mouth to cry, allowing the spoon to be inserted. If instead he clamps his mouth shut and the mother needs both hands free, she should wrap the child snugly in a sheet or blanket with his arms against his sides. Then the mother can force the child's mouth open with one hand and insert the spoon with the other.

Nose or eye drops can also be administered with the child wrapped in a blanket or sheet.

In conclusion, Dr. White noted that the parents, after administering the medicine, should give the child all the love and sympathy he needs.

AMERICAN MEDICAL ASSOCIATION NEWS

NEW MEDICAL CARE PLAN PROPOSED FOR AGED

The American Medical Association has approved a proposal which calls for physicians to provide medical services at adjusted rates to persons over 65 years of age with reduced incomes and modest resources.

The unanimous action was taken by the House of Delegates, A. M. A.'s policy-making body, at the 12th clinical meeting held recently in Minneapolis.

The proposal means that America's aged population will be more adequately protected when medical care is required and it is a major step toward hitting A. M. A.'s self-appointed number one target—to solve medical and socioeconomic problems arising from a rapidly expanding aging population.

As adopted by the House of Delegates, the proposal asks insurance companies and prepayment plans to develop new policies at special low premium rates for those over 65 who are in the low income brackets.

The plan provides that if the income and resources of the insured falls below a specified sum, doctors would agree to adjust their rates accordingly.

In passing the proposal the House urged doctors throughout the country to "accept a level of compensation for medical services rendered . . . that will permit the development of such insurance and prepayment plans."

Dr. James Z. Appel, Lancaster, Pa., a member of the A. M. A. Board of Trustees, and Dr. David B. Allman, Atlantic City, N. J., immediate past president of A. M. A., said the possibility of such policies has been discussed with insurance and prepayment representatives and "they are enthusiastic about it."

"We hope our action will be a spark that will get other groups to do likewise," they added.

In its report, the House of Delegates noted that the medical profession must continue to assert its leadership and responsibility for assuring adequate medical care for the aged.

It urged that the "American Medical Association, the constituent and component medical societies, as well as physicians everywhere, expedite the development" of this program.

A. M. A. OVER 65-AGE PROPOSAL AS ADOPTED BY THE
HOUSE OF DELEGATES, MINNEAPOLIS MEETING,
DECEMBER 4, 1958

"For persons over 65 years of age with reduced incomes and very modest resources, it is necessary immediately to develop further the voluntary health *insurance* or *prepayment* plans in a way that would be acceptable both to the recipients and the medical profession. The medical profession must continue to assert its leadership and responsibility for assuring adequate medical care for this group of our citizens.

"Therefore, the Council on Medical Service recommends to the House of Delegates the adoption of the following proposal: That the American Medical Association, the constituent and component medical societies, as well as physicians everywhere, expedite the development of an *effective voluntary health insurance or prepayment program* for the group over 65 with modest resources or low family income; that physicians agree to accept a level of compensation for medical services rendered to this group, which will permit the development of such *insurance and prepayment plans* at a reduced premium rate.

"This recommendation has been studied and re-studied by the Board of Trustees and has received its wholehearted endorsement."

Mental Health Conference—Mental health, aging, nutrition, dental health, costs of medical care, and health insurance—and their effect on rural residents—will be highlighted at the 14th National Conference on Rural Health, March 5-7, in Wichita, Kan.

The conference, sponsored by the American Medical Association's Council on Rural Health, will have as its theme, "Horizons in Rural Health."

To be held at the Broadview Hotel, the meeting will be attended by some 700 representatives of medicine, farm groups, governmental agencies, and other lay groups.

Among the speakers scheduled for the meeting are Dr. Louis M. Orr, Orlando, Fla., president-elect of the A. M. A., and Gov. George Docking of Kansas. They will speak at the opening session Thursday morning, March 5.

The meeting will be keynoted by Earl L. Butz, Ph. D., dean of agriculture and director of agricultural extension services at Purdue University, Lafayette, Ind. He will discuss "The Do It 'Yourself' Age." Dr. F. S. Crockett, Lafayette, chairman of the A. M. A. council, will outline the horizons in rural health.

ANNUAL SESSION

BIRMINGHAM

APRIL 9, 10 AND 11

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

March 1959

No. 9

INJURIES TO THE URINARY TRACT

PARK NICELEY, M. D., F. I. C. S., F. A. C. S.

and

ARTHUR W. WELLING, M. D.

(By Invitation)

Knoxville, Tennessee

With the increasing frequency, severity, and multiplicity of wounds suffered from accidents in the modern powerful automobile, we can expect the urinary tract to have its percentage of injuries. The urologist seldom sees these patients in the emergency room and often it is hours or days before he is called for consultation. The patient may be in shock from loss of blood or cerebral concussion, and the diagnosis is made only from physical examination, x-rays and laboratory procedures. It is incumbent upon us as doctors to be exceedingly careful in the initial evaluation of these patients, for much depends upon what is done immediately or in the first few hours after the accident. Good surgical judgment is required to determine how much time should be spent on diagnosis or preparation of the patient prior to surgery. The urologist often has his ingenuity taxed as to whether to operate immediately or to play the conservative part of watchful waiting.

The degree and duration of shock is one of the most important factors in determining the optimum time to operate. The diagnosis of urinary tract injuries is not always made, but if the patient is physically able to undergo the necessary examination, most of these diagnoses can be made before surgical intervention. The question becomes more difficult if other complications, such as abdominal injuries or multiple fractures of the spine and pelvis, are present. The general surgeon may be asked to assist and search for a rupture of a viscus or an intra-abdominal hemorrhage. Whenever there is doubt concerning whether to operate, it is far better to explore the organ than to allow the

hemorrhage to continue or leave the rent unrepaired.

Moderate sedation should be used in those cases where shock is present or impending. Antibiotics and administration of blood are often necessary before surgical intervention or when observation is the method of choice. After adequate blood replacement has been carried out and there are signs of continued blood loss, there is little to be gained by surgical delay. Infection, which formerly was responsible for many deaths, is now of less importance with the advent of effective antibiotic therapy.

After having decided to operate, the choice of anesthetic is important. Pentothal induction, followed by endotracheal ether or cyclopropane, often gives relaxation and is moderately safe. The safer approach to an injured kidney is through a lumbar incision. We prefer a long high lumbar incision along and below the course of the twelfth rib. Either a low lumbar or an iliac incision may be needed in exploring the ureter. A low midline incision from the symphysis pubis to the umbilicus is the method of choice in bladder injuries.

UPPER URINARY TRACT INJURIES

Injuries to the upper urinary tract vary from mild contusions to complete maceration of the renal mass. Fortunately, these injuries occur most frequently in middle age and in youth. These groups are much better able to withstand surgical intervention than older people. Campbell states that injuries to the kidneys are the most common ones in children, research having shown that there is a more marked renal ptosis and undeveloped Gerota fascia and absence of perirenal fat. The kidneys are partly protected by the bony chest cage, the lumbar spine and vertebral muscles. In-

Read before the Alabama Surgical Section of the United States Section of the International College of Surgeons, Mobile, Oct. 3, 1958.

juries to the kidneys in peace time may be placed in three classifications — open, penetrating, and non-penetrating or closed. The majority are the closed type which result from traffic and industrial accidents. Many are slight and cause hematuria and moderate pain, requiring bed rest, opiates and observation. The more severe ones will require transfusions, surgery and antibiotics. With renal injuries resulting from severe auto accidents, the patient often dies from injuries other than rupture of the kidney.

Indirect violence caused by falls on the feet, buttocks, or shoulders may result in damage to the kidney rather than injury directly over the lumbar area. Various injuries to the kidneys have been reported following strenuous exercises or from lifting heavy objects; and this can easily exist in diseased kidneys, such as pyonephrosis and hydronephrosis. Renal damage due to penetrating wounds is rare in peace time, but does occur and is usually due to gunshot or stab wounds. Simple contusions, without extensive parenchymal rupture, occur, not infrequently, but these are not serious and rarely is there extravasation of urine, and surgery is not indicated. Hematuria, pain and subcapsular hemorrhage may be present and the urogram shows a normal appearance. These patients often do well without surgical intervention. Intravenous pyelograms always give much information as to the

extent of damage to the kidney, as well as the function of the opposite kidney.

When the patient is in severe shock from loss of blood or other injuries, the intravenous pyelogram is contraindicated until improvement is noted in his general condition. When the pressure is stabilized and the patient is free of shock, the pyelographic medium may be perceptible in the damaged kidney. If the damaged kidney does not show medium in the urogram and there remains a mass in his flank and perirenal tissue, exposure is imperative. The extent of the damage cannot always be determined without surgery, for the renal parenchyma may be ruptured along with the pelvic and renal vessels, and the patient should have his kidney exposed, repaired or a nephrectomy done. The intravenous pyelogram most frequently gives us the data necessary to determine whether surgery is or is not indicated.

Gunshot wounds of the kidney are often associated with other abdominal wounds and the kidney injury may be overlooked on examination. Wounds involving the hilus of the kidney are always serious and fatal hemorrhage often results. Gunshot wounds frequently cause more damage to other viscera than to the kidney, and the emergency treatment is to expose the abdominal viscera more often than the kidney. Hematuria, pain and abnormal rigidity are always present in severe renal damage and the extent of pain varies according to the severity of the injury. One of our patients had a shotgun wound of his right kidney and abdomen but recovered without surgery.

BLADDER INJURIES

Wounds of the bladder in civil practice are usually in the nature of mucosal tears to a complete rent in the bladder wall. A contusion of the bladder may result in a mucosal tear to a rupture of the muscular wall not including the serosa, resulting only in hemorrhage. A rupture of the muscular wall is often associated with a fractured pelvis where a ramus of the pubis pierces the bladder wall. We also encounter various gunshot, instrumental, and puncture wounds. The empty bladder is less often ruptured, due to its contracted size and the protection offered by a muscular bed within the bony pelvis. The severely injured bladder should have immediate surgical repair of the bladder wall and most of these cases require suprapubic drainage.

COMMON CAUSES OF RUPTURE OF THE BLADDER WALL

1. Penetrating agents, such as a shell fragment, bullets and knife injuries, etc.
2. Blow or fall on the abdomen when the bladder is distended.
3. Penetration of the bladder, following a fracture of the pelvis and spicule of bone from a ramus



Fig. 1. Intravenous pyelograms reveal the pyelographic medium outside the normal pattern of the right kidney. The left kidney is normal.

of the pubis passing through the bladder wall.

4. Fall on a stake penetrating the bladder. Two of our patients had fallen on stakes penetrating the rectum, base of the bladder, and the vertex of the bladder wall.

5. Rupture caused by passing sounds, cystoscopes and, not infrequently, following explosion during prostatic resection.

HOW TO MAKE A DIAGNOSIS OF RUPTURE OF THE BLADDER WALL

1. Symptoms and physical findings.
2. Cystoscopy and direct vision of the rent in the bladder wall.
3. Excretory urogram with cystogram.
4. Cystogram. This procedure has been most satisfactory in our practice and we believe it gives us the necessary information. A catheter is placed in the bladder and from 100 to 400 cc. of a diluted medium is instilled into the bladder with an aseptic syringe and a film is made. If the film shows extravasation around the normal bladder pattern, we know there is a rent in the bladder wall.

If in doubt, explore the bladder (figure 2).

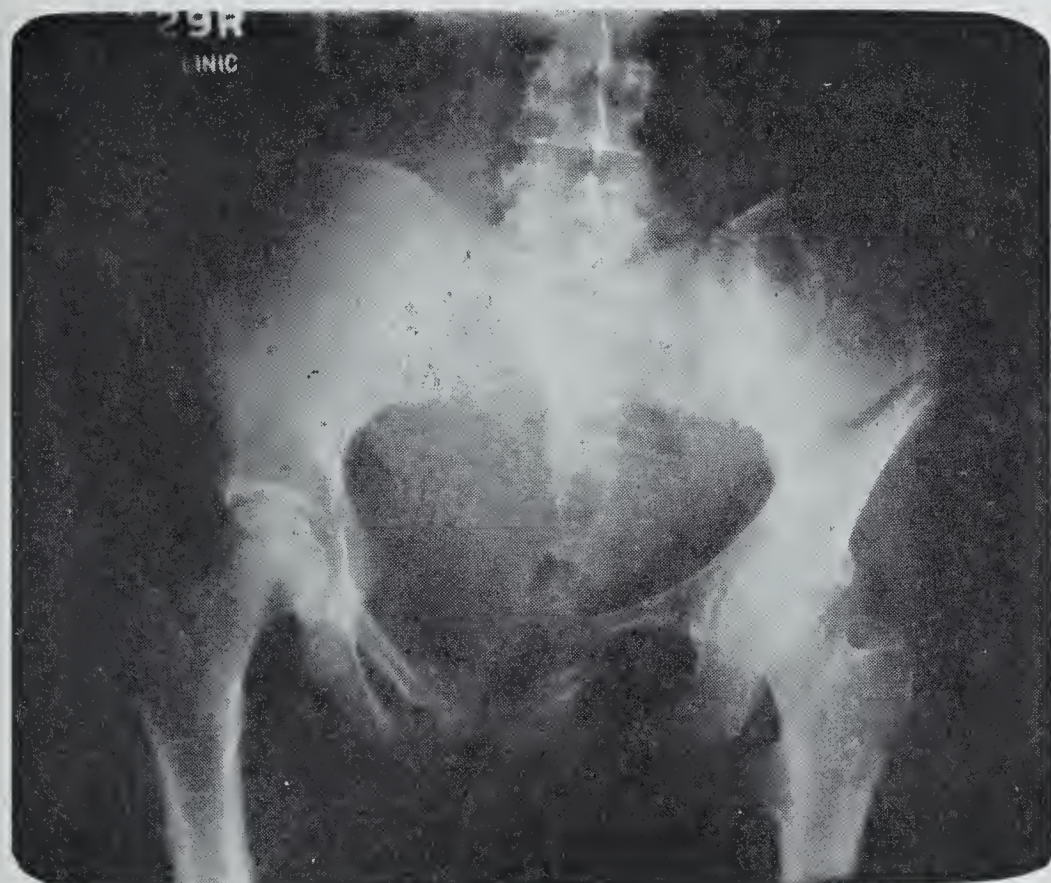


Fig. 2. X-ray of the pelvis reveals fractures of both pubic rami and the left ilium. The left ramus was displaced upward, severing the left lateral wall of the bladder for about three inches.

URETERAL INJURIES

Injury to the ureter, except from extreme violence, is very rare. The ureter is well protected throughout its entire course except from penetrating wounds and they also are very rare. Complications following surgery of the female genital organs and ureteral manipulation constitute most of the complications.

If a patient dies a few days following pelvic surgery, one may suspect ureteral injury and resultant peritonitis or uremia.

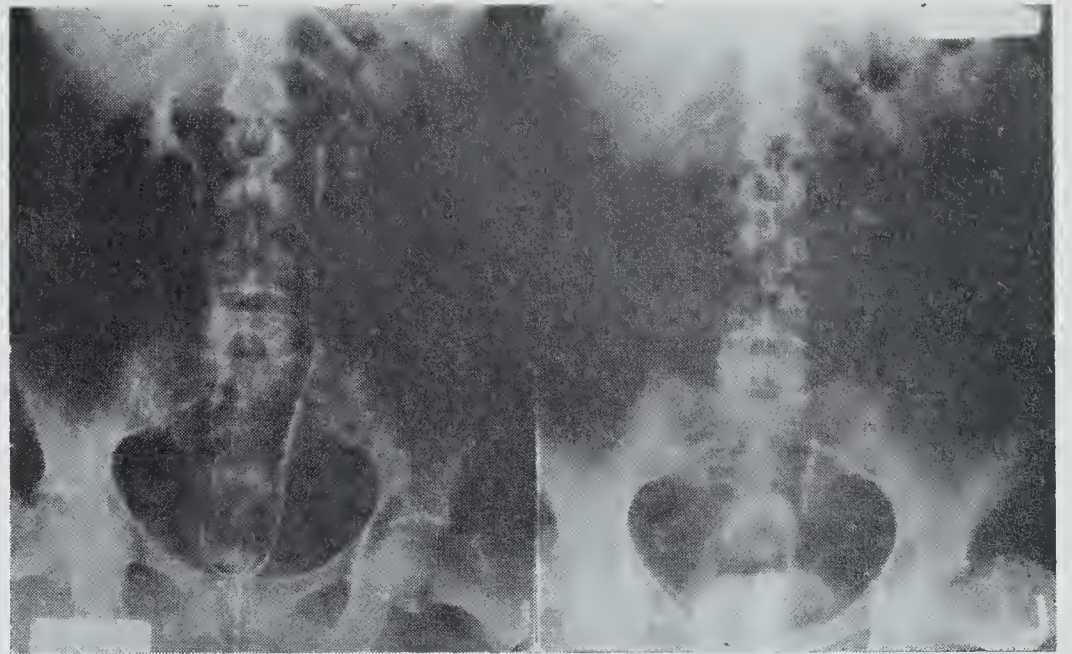


Fig. 3. Intravenous pyelograms reveal a normal cystogram with extravasation of medium coming from a rent in the lower third of the left ureter.

If the ureter is severed during surgery or severely damaged in any way, immediate investigation should be made. The locations where damage is most often done are:

1. Where the ureter crosses the iliac vessels and the brim of the pelvis.
2. Where the ureter is crossed by the uterine artery in the intramural portion of the ureter.

Stone baskets should be used with precaution, for damage to the ureter is much more common than reported.

INJURIES TO THE PROSTATIC URETHRA AND MEMBRANOUS URETHRA

Injuries from instrumentation are not uncommon. Urethral sounds in the hands of the unskilled surgeon are dangerous instruments. Passing a No. 28 F resectoscope sheath when a No. 26 or No. 24 F will suffice often causes a rupture of the urethral mucous membrane. Many of these ruptures will heal without complications but, occasionally, a diverticulum results.

Extravasation must be looked for following severe injuries and must be treated immediately.

STRADDLE INJURIES

One may fall astride an object, crushing the perineum against the inferior surface of the bony arch of the symphysis pubis. Under such violence the urethra may be completely severed, leaving the skin unbroken. Often this results in swelling, and, when voiding is attempted, the urine extravasates and only a few drops of blood exude from the urethra.

If, by chance, a hematoma is present in the perineum, it should be incised and a catheter often can be passed from the bladder downward through the urethra.

End to end suturing of the urethra may be necessary when the urethra is completely severed above the urethral diaphragm. By leaving the catheter

in the urethra from two to three weeks and then removing it, a channel is formed.

If stricture formation results, dilatation under topical anesthesia over a long period of time may be necessary.

Another type of urethral injury is when a spicule of bone from a ramus of the pubis penetrates the urethra and prostatic bed. This occurred in one of our recent patients (figure 4).



Fig. 4. Pyelograms showing a normal upper urinary tract with the bladder displaced upward. The prostatic urethra was completely severed, with severe hemorrhage in the pelvis, giving the classical tear drop appearance of the bladder.

SUMMARY

1. In urinary tract injuries the most important objective is to make the diagnosis without delay, using great care in evaluating the patient's condition.

2. Fortunately, almost all accident cases are brought immediately to the hospital for diagnosis and treatment.

3. If the diagnosis cannot be made in the emergency room, the patient should be moved to the x-ray department or to the operating room.

4. If surgery is indicated, and shock controlled, if it be present, preparation for surgery should be made.

5. If one can exclude serious injury to other portions of the body and the patient can survive the

shock of hemorrhage following the accident, the prognosis will depend greatly on the promptness and adequacy of the surgical treatment.

6. Unless treatment is instituted in severe urinary tract injuries, a 100% mortality will result.

7. In this age of antibiotics, sulfa, and adequate blood transfusions, many injured patients may be kept under observation.

8. If there be a doubt as to whether to operate, we believe that surgical intervention should be done without delay.

207 Blount Professional Building.

BIBLIOGRAPHY

Campbell, Meredith: Urology, Volume 2, Chapter 1, pp. 863-951.

Hamm, F. C., and Weinberg, S. R.: Management of the Severed Ureter, *J. Urol.* 77: 407-413, March 1957.

Herman, Leon: *The Practice of Urology*, pp. 189-200.

Jones, R. F.: Surgical Management of Transcapsular Rupture of the Kidney: 24 Cases, *J. Urol.* 74: 721-740, December 1955.

Liska, J. R.: Recognition and Management of Trauma to the Kidney, *J. Urol.* 78: 525-531, November 1957.

Lynch, K. M., Jr.: Traumatic Urinary Injuries: Pitfalls in Their Diagnosis and Treatment, *J. Urol.* 77: 90-95, January 1957.

Reaves, J. U.: Surgical Injuries to Urinary Tract, *J. Urol.* 57: 65-72, January 1947. (Checked Q. C. I. M. from 1938-1947.)

Changes in Moles Should Not Be Ignored—Moles, "the commonest of all tumors," seldom cause trouble, but one kind needs careful watching because it may produce "the most malignant of all cancer."

This type is junction nevus. It is described in the February Today's Health, published by the American Medical Association.

Some moles may contain certain cells called "nevus cells" which may predispose to the development of cancer. A mole with these cells is called "junction" because it rises at the junction of the first and second layers of the skin.

Common moles practically never become malignant, the article said. Moles that turn cancerous almost invariably get their start in junction nevi.

Most junction nevi never turn cancerous either, but they may occasionally do so. If there are changes in a mole—deepening in color, increase in size, or noticeably heightened sensitivity—a doctor should be consulted. If he finds the mole to be a junction nevus, then he should remove it—before it has a chance to become malignant.

"The odds are very much against every human being, even the most freckled, having a junction nevus," the article said. "Hence the anxious examination of one's moles is no more to be encouraged than the hourly taking of one's pulse if all else is well.

"But the grave risk of ignoring any changes in the elevation, shape or color of a mole is not to be encouraged either. Let a physician and his laboratory decide. It might be a junction nevus."

The article was written by James C. G. Coniff, Upper Montclair, N. J.

SOME COMMON DENOMINATORS IN THE MEDICAL MANAGEMENT OF PATIENTS

CHARLES E. GOSHEN, M. D.
Washington, D. C.

THE CONCEPT OF ILLNESS

We physicians have, traditionally, confined our interest in human beings largely to questions of *ill* health. We have studied *good* health only for the purpose of setting up the normal standards against which we measure the signs of ill health. A body temperature of 98.6 degrees, or a blood pressure of 120/80, or a 100% hemoglobin, or a white count of 9,000, or an unblemished skin, or a soft abdomen is of interest to us only as features which may *not* be present to these degrees in sick people. In other words, our orientation is directed toward pathology, not physiology. In a broader sense, we might say that we physicians are concerned primarily with human failure, not with success. A state of good health is the objective toward which we work, but once we achieve it in a patient, our interest disappears. When we do manage to broaden our perspectives in matters of public health, we think and talk only of what might be done to prevent or avoid certain specific tragedies such as typhoid or polio; we do not pay much attention to the positive aspects, which would be, what can be done to maintain a state of good health. Because we are oriented only toward the treatment and prevention of specific forms of ill health, we can succeed only insofar as we can manage to discover and circumvent each one. No sooner do we lay one at rest than another takes its place in the statistics of morbidity and mortality.

Because of this traditional, negative orientation toward humanity, we physicians tend to feel comfortable, in contrast to other people, *only* when we are dealing with illness. This quality is so important and pervasive among physicians that we often feel it necessary to invent an illness in order to justify our intervention as physicians in people's lives. Unfortunately, this attitude is well-known to the public, as a result of which our patients feel it is necessary to be ill before consulting a physician. The patient, too, might go to the trouble of inventing an illness in order to justify his seeking a physician's help. These attitudes are especially pronounced when a person becomes a patient in a hospital, in which case every possible effort is made to substantiate the admission on the grounds of illness, without evidence of which the patient finds himself very unwelcome.

There are many customary procedures surrounding the kind of attention which physicians and nurses accord their patients which tend to emphasize the necessity of being ill in order to attract medical interest. Patients must have their temperatures and blood pressures measured, if in a hospital they must be in bed and dressed in sleeping clothes, a clinical chart must be prepared, they must be exposed to the view of stethoscopes and x-rays, and they must address the medical staff with professional titles which indicate a clinical background. Even more significant, the patient must begin his introduction to the doctor with a list of complaints, and must portray his life in terms of the ups and downs of poor health, but, most important of all, he must cease all association with the medical and allied professions as soon as he has nothing more to complain of. The truth of these allegations is demonstrated by the humor we find in the epitaph which a well-known hypochondriac put on his tombstone: "Now, the doctors will believe me."

If the kind of attitude described above is an offense against humanity, then the most offensive of physicians must have been us psychiatrists. We psychiatrists have been far more ingenious than the other specialists in inventing illnesses in order to justify our existence as physicians. Internists have invented make-believe illnesses such as "over-weight," surgeons have invented "flat-feet," ophthalmologists invented "eye-strain," gynecologists tried their inventive talents on "dysmenorrhea," and others have contributed "insomnia," "hypotension," "sacro-iliac sprains," "deviated nasal septum," and so on. These are naive, though, when compared with the inventive genius that has gone into the creation of the illusory illnesses of psychiatry. It might be of interest to outline the history of psychiatry's determined efforts to cement its relations with the medical profession through the evolution of its concepts of "mental illness." A list of some of the significant historical facts follows:

1. A hundred and fifty years ago it was *not* the common practice to regard the people we now know as psychiatric patients as being medical problems. Instead, they were generally looked upon as being social problems to be cared for in jails and almshouses. The father of American psychiatry, Dr. Benjamin Rush, did a great deal toward bringing the care of these patients into the field of medicine, and toward the development of the medical specialty of psychiatry, one hundred

The James S. McLester Lecture, presented at the 17th Postgraduate Seminar of the Alabama Academy of General Practice, Birmingham, August 20, 1958.

The author is Director, General Practitioner Education Project, American Psychiatric Association.

and fifty years ago. It was not until the middle of the last century that a move was started to label the specialized institutions in which these people were kept as "hospitals." Today, this move is still under way as shown by the tendency to change the names of the schools for the mentally retarded to "hospital." To justify the inclusion of these people within the domain of medicine, the concept of "mental illness" was created.

2. In the past, any examination of the inmates of a mental institution would create the impression of illness being present because of the general unpleasant, undernourished, unkempt appearance of the patients. Today we realize that this unfortunate appearance originated not from illness but from neglect. In contrast to the usual picture seen in the typical, poorly staffed, run-down state hospital, the patients of a high-priced private hospital are often pictures of good health, simply because less neglect is practiced.

3. The incidence of certain debilitating chronic diseases, such as tuberculosis, was always high in mental hospitals in the past, and only recently have the morbidity rates for mental hospital patients come to approach the rates for the general population. The prevalences of these diseases lent a great deal of weight to the notion that these patients were "sick." Again, we are beginning to realize that this situation has been a by-product of neglect.

4. In the past, the incidence of central nervous system disease was high in mental institutions. Neurosyphilis, nutritional deficiencies, etc., were the first psychiatric complications which came to be understood and treated in mental hospitals. The prevalence of these conditions encouraged the assumption that all the other psychiatric conditions were based on similar pathology, the nature of which would sooner or later be discovered. However, as we make greater and greater strides in the elimination of these organic brain syndromes, there remains a larger and larger preponderance of cases with no demonstrable brain pathology, which should, but too seldom does, create in our minds a doubt that any will ever be found.

5. The life expectancy of patients in mental hospitals, until very recently, has been much lower than that of people in the general population. This fact lent substantial support to the concept that psychiatric patients were "sick." Today, however, we do not expect the life expectancy to be any worse in a mental hospital than outside, unless there is present the kind of neglect which characterized the institutions of the past.

6. For a long time, and including the present, what has been called "research" in psychiatry has been almost entirely oriented toward organic notions of illness. Although none of the so-called "discoveries" in this field ever hold up scientific-

ally, we hear of new ones every year which receive enthusiastic acclaim for the moment but are soon forgotten. This type of emphasis on blood chemistry, brain tissue studies, metabolic investigations, etc., further tends to perpetuate the tradition of "illness" as applicable to psychiatric patients.

7. The patients to which psychiatrists direct their attention characteristically interpret any discomfort they feel as a sign of "illness," and their complaints are, accordingly, regarded as "symptoms." Only recently have some of us psychiatrists come to realize that psychiatric patients are primarily interested in finding excuses either to justify their failures or to alibi their way out of responsibility. This tendency applies equally well to the mild neurotic seen in office practice, and to the seriously disturbed psychotic seen in state hospitals. When we take the trouble to find out the real nature of the discomfort of which the patient complains, we find it is based on fear, anger or tension, which is being misinterpreted by the patient as signs of physical disease rather than as physiologic manifestations of emotions. These misinterpretations of the patient, accepted at face value by the physician, serve as strong reinforcements in maintaining the concept of psychiatric "illness."

8. The labels which have come to be attached to the psychiatric patient, those attached to the procedures involved in caring for him, those applied to the institutions in which he is likely to be housed, as well as most of the terminology surrounding the whole subject of psychiatry, further serve to perpetuate the concept of "illness" in the minds of both the profession and the public. These labels and terms include: "hospital," "treatment," "diagnosis," "convalescence," "prognosis," "improvement or lack of it," "epidemiology of mental illness," "etiology of mental illness," etc. These terms evolved from a humanitarian effort to abolish the unpleasant terms which had previously been used and which helped create a prison-like atmosphere to the institutional care of mental patients; including such terms as: "asylum," "commitment," "confinement," "parole," "escape," etc. The medical labels certainly represent a humane improvement over old policies, and as such become readily accepted by all those people interested in elevating the social status of the psychiatric patient and the institutions and professions engaged in their care. Nevertheless, these newer, more acceptable, labels become euphemisms insofar as they tend to perpetuate an illusion.

9. Today, there is a new trend developing which further tends to cement in physicians' minds the notion that the psychiatric patient must surely be "ill." This trend is represented by the advancing encroachment of non-medical professions, such as social work and psychology, into the field of psy-

chiatry. We psychiatrists have faced this invasion with a very confused set of attitudes. On the one hand, we welcome any help we can get from these other professions, realizing how inadequate our numbers are in combating the total problem, and we have advanced the concept of a "team approach," employing the services of these allied professions. On the other hand, however, we tend to be jealous of our prerogatives as physicians having the primary responsibility for the care of the patient. The concept of "mental illness" lends itself to a neat solution to this conflict. As long as we maintain the theory that we are dealing with "illness," we can find a convenient justification for subordinating the non-medical professions, and the temptation to fall back on this rationalization has, so far, been too great to resist. Few psychiatrists have had the courage to compete with the allied mental health professions on any but these traditional medical practice grounds.

10. The nonpsychiatric physician more understandably falls into the same trap set by the psychiatric patient and by tradition. He feels much more at home with a strictly organic-medical approach to patients, and tends to apply the same methods and procedures to psychiatric problems as he does to other medical-surgical problems, being generally untrained in and somewhat suspicious of the less tangible principles of a psychosociologic orientation. His influence becomes an important one in bolstering the widespread concept of "mental illness."

11. "Treatment," as applied to the psychiatric patient, is generally publicized in terms of electric shock, insulin, drugs, prefrontal lobotomy and the social and psychologic rehabilitation of the patient is generally couched in terms other than "treatment." This tends to intensify the concept of "mental illness."

A CONCEPT OF HEALTH

We have presented above a series of eleven important factors which have developed, and serve to maintain, the entrenched idea of "mental illness," only to illustrate one extreme—and that is the way in which medical orientation to psychiatry is based on the assumption of illness in the psychiatric patient. Similar factors, but more subtle, perhaps, apply to the typical physician's approach to all people who seek his services. We present the thesis that medical science has been so completely preoccupied with human pathology that it not only ignores the other side of the picture but feels very ill at ease in the face of it. This explains why most physicians regard it as much more risky to put a stamp of "good health" on a patient than it is to arrive at an incorrect diagnosis of pathology. The former is regarded, generally, as some sort of medical failure, and is to be avoided at all costs,

but the latter is regarded merely as a forgivable error of judgment.

We would now like to present a case for a totally different philosophy of medicine. We feel that it is especially appropriate that this suggestion come from a psychiatrist, for we psychiatrists have been the ones most guilty of the abuses which go with a purely negative outlook of human health and illness.

First, we will raise a rhetorical question: In any other field of human endeavor, who are the most appropriate people to go to for useful knowledge when we undertake some study? Obviously, the people who can teach us the most are those whose experiences have been successful. Those people who have tried, but failed, will have very little to teach us. If this is so, and there seems little doubt of it, then we might consider the possibility that healthy people may have more to teach us than sick people. Although this statement may appear extreme, we can at least be reasonably certain that healthy people have consistently been ignored as subjects for physicians to study, and, by this token alone, they deserve more attention than we have granted them. It is true, of course, that sick people become the captives of medicine, and are therefore more available to study; and in the case of the psychiatric patients, they become our captives first, then we go about trying to prove they are sick, and then we study them. A manifestation of our ignorance of healthy people is demonstrated by the fact that many of the blunders and incorrect practices of medicine have been based on lack of information about normal, healthy people. Psychiatrists, especially, refrain from any attempt to define, measure, or judge healthy normality.

Even more important than the facts is the prevailing attitude among physicians which ignores good health as an appropriate area to study. The philosophy of medicine, itself, pays only token attention to physiology, being really interested solely in pathologic aberrations. The first half of this twentieth century has been marked in history as the greatest era of achievements in conquering human disease. Perhaps it is timely for us to make the second half of this century the great era of achievement in the study of and maintenance of good health.

A person who maintains a consistent state of good health, on the one hand, and one who is perpetually troubled by poor health on the other are both products of different ways of living, to a very considerable degree. It is true that there are some hereditary or constitutional factors which influence the health of people, but, as time goes on, we find less and less cause to incriminate heredity as a major causative factor in illness. The frequency and severity of the injuries and infections we

sustain, the degree of disability resulting from illness, the amount of suffering endured, the nature of the complications which arise are all strongly influenced by the particular way of living which the person has practiced during his lifetime. The person who has learned a way of living which is characterized among other features by consistent good health will generally demonstrate, as well, a rather consistent degree of success in his vocational life, and will be generally happier and better adjusted than average. Contrariwise, people who go through many ups and downs of poor health will also show a higher frequency of failure and a lower level of adjustment and happiness. In other words, people who are successful in other areas of living are likely to be successful in maintaining good health, also. It would be most incorrect to assume that the one type of success causes the other. It is more reasonable to conclude that the same way of living tends to generate success in many different areas. Similarly, a different way of living tends to breed failure in many areas. As our civilization makes forward scientific progress, a widening distinction becomes apparent when we compare the general health of our population with that of more backward countries. As we study the latter more and more, we begin to appreciate the ways by which tradition, custom, ignorance, religion and certain types of government contribute to a way of living among these backward people which results in serious and widespread poor health. In our American culture, on the other hand, ways of living are available which produce much longer life expectancy, reduced morbidity and suffering and other manifestations of a better level of good health. One of the greatest distinctions between our civilization and the culture of these less developed countries is that the individual has a much wider freedom of choice in the selection of his way of living. The freedom available also allows for the possibility that many individuals will not take advantage of the healthier choices.

A study of the way of living of healthy people would consist of observations on what these people do from moment to moment, day to day, and year to year, and how they do what they do. An analysis of these observations would consist of an assessment of the many decisions, or choices, which these people make throughout their lives. Their way of making decisions would be a measure of the judgment they have developed from their life experiences. When these factors are compared with the same ones observed in a study of essentially unhealthy people, major differences would be noticed, and the basic difference would boil down to the question of individual judgment. Since judgment is something which can be learned, taught, improved, and otherwise changed, there

could evolve from such studies a practical way of doing something about the problems of poor health. It would consist of teaching the kind of judgment which has been mastered successfully by the healthy people to the unhealthy who have not learned it.

In order for us physicians to redirect our thinking to the subject of health, in place of our traditional preoccupation with illness, we must sharpen the distinction between what we consider physiologic against what we regard as pathologic. The following definitions are suggested as guides: (1) A physiologic state is one in which body organs, tissues, and cells respond to work, or use; (2) A pathologic state is one in which body organs, tissues and cells respond to the introduction of some noxious or injurious agent. In either situation, there may be observed phenomena which we usually call signs or symptoms. For example, tachycardia may be produced physiologically as a result of exercise, or pathologically as a result of rheumatic fever. It is more than likely that our concepts of treatment will need to change in order to adapt to this kind of orientation. For example, it will probably be found that the use of drugs, surgery, and other injurious agents is contraindicated for physiologic conditions, and applicable only to pathologic conditions. Many cases of apparent hypertension, for instance, are probably physiologic rather than pathologic, and will, therefore, require a therapeutic approach which excludes the use of drugs. Instead, it might be more realistic to attempt an alteration of the patient's way of living rather than a direct alteration through drugs of the patient's biochemistry. We must realize that all drugs and operative procedures introduce noxious or injurious effects on the body which can be justified only when there is a good chance of this being able to neutralize some other harmful agent without undue damage to the body. Our therapeutic approach to pathology, in other words, is a matter of choosing the lesser of two evils, the one being the potential harm to the body from the disease, and the other the harm which might be done to the body by the treatment. In contrast, our approach to physiologic states which demand some alteration (overweight, for example) becomes a choice between two ways of living (for example, the choice between a way of living characterized by much eating and little exercise on the one hand, and one having the quality of less eating and more exercise on the other).

APPLICATION OF CONCEPTS OF HEALTH AND ILLNESS TO PSYCHIATRIC PROBLEMS

The above preamble is designed to set the stage for a new look at the question of psychiatric problems. It is hoped that it will prompt you to think

along lines which are not usually taught in medical school, but which will enable you to see the psychiatric aspects of your patients in a light which will make more sense, and offer you a set of principles which can better guide your management of the patient. The patients referred to are not only those usually called psychiatric patients but rather to all the patients you see. Let us approach our discussion of the problem in a series of steps progressing from the general to the specific.

1. *Each patient is, above all, a person.* This trite statement is one you must be tired of hearing, but like most bits of common sense, it bears repeating and clarification in spite of the fact that we tend to get bored with it. By "person" we mean that for each patient there is a lifelong past history, a present, and a picture of the future, all of which is made up of successes and failures, hopes and fears, pleasures and disappointments, memories and goals, work accomplished and work avoided, and included among all the many facets of his life there have been, are and will be various encounters with illness and injury. It is, of course, the latter or the patient's ideas of the latter which bring him to the physician, but let us remember that with him also come the other qualities which make him a person. In other words, each patient has his own way of living made up of the many things he does and the particular way he does them, and this way of living is characteristic of him.

2. *Understanding the patient consists of learning about his way of living.* We cannot get a true or accurate picture of a patient until we get some information about his way of living, and from this information we are in a better position to interpret what we see and hear during the patient's visits. The family physician has access to other important sources of information through his knowledge of the community in which the patient lives, and what he knows about the many people with whom the patient comes in contact. The prevailing economic conditions of the community, for example, will be important items which the physician will have knowledge of and which will influence the patient's way of living.

3. *Behind the patient's way of living is his way of thinking.* We indicated before that any particular way of living is made up of the experiences which result from the many decisions and choices each person makes in his life. He chooses to live in a particular community, selects a certain kind of job, decides on marriage and whom to marry, chooses a home, his friends, his hobbies, etc., and he makes these decisions according to, in spite of, or in opposition to the various influences of other people, tradition, education, etc. The quality, therefore, upon which his way of living is based is the quality of his decisions, which means his particular

way of thinking. Thinking is, essentially, the process by which we make decisions; a decision being a plan for action. There is a very marked consistency between what and how a person acts, and what and how he thinks. There is not as much consistency, however, between what he thinks and what he says. As a result, we cannot rely very much on what the patient tells us unless we know that what he says is in keeping with what we see him do. A simple example of a probable contradiction between speech and performance is shown by the patient who states that he gets along well with his wife when we know that he has had a previous divorce; in which case we must suspect that if one marriage ended in divorce, the second is probably not as serene as he might want us to think.

4. *Each person interprets reality in his own unique way.* The differences (as well as the similarities) in people's ways of thinking result in their attaching their own particular meaning to their experiences. For example, a person whose way of thinking and living is characterized by a consistent penny-pinching attitude is likely to resist the suggestion that he have a hernia repaired on the basis of how it might affect his pocketbook. Another person who has been consistently dependent on the attention of others may resist or welcome a hernia operation on the grounds that it might either remove him from or attract the attention of others. The choice of words we have to express ourselves is not broad enough to convey our particular meaning to others, and to do so would require endless definitions, so when a patient tells us something about himself, we cannot rely on this as being informative until we can check it with other sources of information. The emotion expressed gives us important clues and must not be overlooked. For example, when a patient tells us that he is suffering from an unbearable pain, we can accept this at face value only when the emotion expressed is appropriate to an unbearably painful situation.

5. *We can classify the possible ways of thinking according to how rational they are.* In judging the rationality of a person's thinking, it is important to realize that what we need to assess is not what that person's conclusions are but how he arrived at them. Most conclusions arrive at one of two possible choices, such as yes or no, for or against, will or will not, like or don't like. Knowing which of two possible conclusions has been arrived at reveals very little about how rational it is. On the other hand, knowing what facts or influences or systems of logic were used in arriving at the conclusion does reveal the degree of rationality. A rational way of thinking is characterized by the adding up of the facts which apply

to a problem, and then weighing these facts according to the judgment developed from past experiences. Irrational ways of thinking make little use of facts, and the judgment used is not a logical assessment of past experience.

6. *A psychiatric classification of people is, essentially, a classification of rationality.* Traditionally, we psychiatrists have classified people by descriptions of their complaints or behavior and this system produced an endless series of rather meaningless terms, mostly ending in the suffixes "phobia" or "mania." Recent modifications of this unworkable system have consisted of attempts to simplify but without much effort to clarify, inasmuch as they do not settle the basic issue of what about the patient is being classified. If, instead, we look upon all people (not just a few peculiar ones) as differing, basically, in their ways of thinking, then we can arrive at a simple, meaningful system of classification based on an assessment of rationality. (It might be pointed out here that an estimate of a person's rationality is not the same as estimating intelligence, since, as we all know, intelligent people can be irrational.)

7. *The fundamental characteristic of people having psychiatric problems is their irrational way of thinking.* An important corollary to this statement is that irrational ways of thinking are likely to produce psychiatric problems. The essence of a psychiatric disability is a failure in the person's way of living, and this failure is a result of a way of thinking which is unsuccessful, which boils down to being irrational. The manifestation of failure is generally shown in the person by unhappiness and discomfort, which is what brings him to the physician. We physicians in general, and psychiatrists in particular, have generally looked too narrowly upon the patient's discomfort and not the failure in life which produced it, and as a result have too often failed to realize that a fundamental change in the patient's way of living is needed in order to produce more comfortable results for him.

8. *The essence of rationality is responsibility.* When we become acquainted with the thinking processes of normal people and compare what we find in psychiatric patients, we become more and more impressed by the different approaches the two groups take toward responsibility. The rational person's thinking is pointed primarily in the direction of arriving at his own decisions on what to do in life. The psychiatric patient, on the other hand, is primarily interested in avoiding responsibility, and, therefore, his thinking is not primarily directed toward making decisions for getting a job done. The rational person seeks pertinent facts and information which he weighs in the balance of good judgment. He "thinks for

himself," in other words, and takes responsibility, not only for his actions but for his decisions as well. When we find that a patient characteristically, willingly, and readily makes his own decisions in a responsible way, we can be rather certain that we are dealing with a rational person, in which case we could classify him psychiatrically as "normal."

9. *There are different ways of being irresponsible, therefore, irrational.* It is not oversimplification to regard people having psychiatric problems as being of two types in respect to the basic issue of irrationality. The one type is most simply classified as "neurotic" and the other as "psychotic." Further subclassification will generally be more misleading than useful. The neurotic exhibits a kind of irresponsibility, therefore, irrationality, which is very much like that we would expect to see in a child of 12 or 13. Superficially, what we see is a conflict produced by wishing to get the rewards of being an adult but without doing the work. When we examine the method of thinking behind this conflict, we find the neurotic weighing the opinions of others (real or imagined) rather than the facts of the case. We find that his interest is not that of arriving at a good decision to get a job done, but, like the child, he is more interested in figuring out what he wants and how he can get others to get it for him. Instead of using judgment built on past experiences in choosing the most workable method, he makes estimates mostly of what would cost him the least work. As a result, he is apt to repeat mistakes over and over again, since he does not make much use of past experience. Also, like the child, he puts himself in an uncomfortable position where he, on the one hand, makes his decisions according to other people's opinions, thus unwittingly enslaving himself to others, while on the other hand resenting the influence others thereby have over him. He may deal with this resentment with rebellion, only to confront himself with another dilemma, namely, the disapproval of others. Since other people's approval (like the child) is so important to him, he fears showing open rebellion, but, nevertheless, constantly feels the temptation to rebel against dependence on others produced by his own unwillingness to think for himself. Each neurotic attempts to resolve this conflict in his own way. One of the common ways employed by the neurotic is to seek, through real or simulated illness, a way by which he can avoid responsibility on the one hand but without the risk of disapproval on the other. Because conflict breeds tension and tension, when prolonged, produces discomfort, the neurotic is constantly uncomfortable. By a little twist of the imagination, he can easily express the uncomfortable signs of tension in such a way as to make it look like an illness.

Since he does not understand the difference himself, he can easily be fooled into believing that his discomfort is evidence of poor health. This is the point where the physician may easily fall into a trap, for he may take the neurotic's interpretations at face value, and treat the patient as a sick person, when actually he is only suffering from the physiologic manifestations of tension. Because illness seems to resolve his basic conflict in life, he will be unusually receptive to a diagnosis of illness, and will respond very favorably (though only for a short time) to medical treatment. This fact has recently created several millionaires among people who held stock in drug companies which manufacture the so-called tranquilizing drugs. These chemicals offer him the perfect solution (irrationally speaking, of course) to his dilemma: how to feel more comfortable but without changing his irrational way of living, that is, without working. Unfortunately, for his scheme however, the relief never lasts very long.

In brief, we might say that the neurotic's way of being irrational is sort of a half-way irrationality, in that he tries to be like other people, and tries to be liked by other people, but is unwilling to do his full share of work in order to achieve his goals successfully, and therefore fails.

The psychotic, on the other hand, does not stop at any half-way measures, but goes all out toward irresponsibility and irrationality. Not only is he not interested in doing what others do in the way of work, but he is not interested in being like them or in being liked by them. He wishes, instead, to be unique, different, superior to, other people. What he does in this direction usually makes him appear peculiar to others rather than superior. In his thinking, he abandons his past experiences and the facts which are pertinent to a problem, and focusses his attention only on what he wants, then distorts his concept of reality to fit his own wishes. Instead of his decisions becoming plans for appropriate action, they become devious ways of getting away with something. He is concerned with other opinions in the sense that he wants others to think him right, and is therefore intolerant to any criticism, but he is not interested in other people really liking him. He triumphs when he proves (in his own mind) someone else wrong, and, unlike the neurotic, does not care whether his conquest makes him likable in the eyes of others. The type of logic we see in the psychotic is so far-fetched and irrelevant to facts that it is usually fairly easy to assess. The problem is usually found in getting the psychotic to expose his thinking to the gaze of other people. This he is very fearful of doing, and besides his manner of thinking is so haphazard and disjointed that there is an understandable difficulty in his remembering what it

was, to begin with, not to mention the difficulty of putting something so irrational into words. In other words, you will quickly recognize psychotic thinking when you see it, but you may have trouble bringing it out into the open where it can be seen.

THE IMPLICATION OF THESE CONCEPTS TO MEDICAL PRACTICE

Using what has been discussed so far as a theoretical framework, it is suggested that the following principles be applied to the management of patients in general practice:

1. *All patients are psychosomatic.* By this we mean that each patient we see deserves our understanding of both his way of living and thinking, as well as our understanding of his problems of ill health. Even when our study of the former can result in our being able to give the patient a clean bill of health as far as the "psycho" side is concerned, this is just as important as being able to give a clean bill of health on the "somatic" side to another patient whose difficulties are entirely psychiatric. It is comparable to finding that a patient who needs an appendectomy has a healthy circulatory system. It will represent a major asset in our handling of other problems, but we will not realize this unless we examine the patient for it. Many patients, on close study, will demonstrate a certain amount of trouble on both the "psycho" and the "somatic" side, and both will need to be dealt with, otherwise they get in each other's way and interfere with our total medical management. A third group will be found to have difficulties purely related to disturbed ways of living, and will not demonstrate any pathology. Statistical studies of general hospital outpatient departments rather consistently show that, in any group of unselected patients, there will be approximately equal numbers of these three groups; that is one-third is made up of individuals with somatic illness in the presence of a rational way of living; one-third is made up of those with disturbed ways of living, but in good physiologic health, and the other third will be mixed. These findings are so consistent that when we hear a physician state that he sees very few psychiatric problems in his practice we have reason to suspect his diagnostic skill.

2. *Psychiatric problems can be reversed only by a change in the way of living.* When the patient presents a problem which is wholly psychiatric, partly psychiatric, or when a psychiatric problem exists side-by-side with a somatic problem, it is more than likely that the patient's best chance in life of getting assistance will be from the physician he consults about his health problems. When the physician is confronted with the psychiatric problem, and elects to try to do something to help the patient with it, he is faced with the question of what to do. The answer, above all, will be found

when the patient changes his way of living, and, without change, there will be no improvement. To change his way of living, he needs to change his way of thinking, and this might seem like a very large order to the physician. However, there is one basic principle which can be put across to the patient, which, if accepted and followed, will produce the desired results. This principle is based on the recommendation that the patient begin to do more of his own thinking, make more of his own decisions, take more responsibility, do more work, try more things in life, introduce more variety, etc. The central feature of this recommendation is "make more of your own decisions, and decide more often in favor of work."

3. *Use oneself as a base of reference.* Assuming physicians are rational and responsible people, and the exceptions are infrequent, the basis of comparison you will use will inevitably be yourself. When we compare what we do in our lives with what the patient does in his, we will have a convenient way of estimating how the patient gets the results he does, as compared with the results we get from our way of living. If his results are full of failures, disappointments and unhappiness, and ours is the opposite, the difference will be reflected in what he does compared with what we do. Nine times out of ten, it will be found that the unhappy, uncomfortable person has done a lot less than the happier one, especially in the matter of work and variety of experiences. The logical recommendation to make becomes that of encouraging him to try doing some of the things we have done.

4. *Resistance will be offered by the patient.* The neurotic and the psychotic will both present a great deal of resistance toward making any change in their lives, especially when it requires taking more responsibility. This feature is so characteristic of the irrational person that it can be used as a diagnostic clue. We can usually suspect that we are on the right track when the patient offers a lot of excuses for not following our suggestions.

5. *The physician's personality will be his greatest asset.* The kind of influence which the physician will be able to exert will depend entirely upon the type of relationship he develops with the patient. The kind of relationship which is most likely to pay off is one which is characterized by the physician's showing an interest, taking enough time to find out what he is dealing with, being patient, above all being calm, and not letting himself be trapped into accepting the patient's distorted interpretations. These qualities, of course, will be products of the physician's own personality and the more he understands himself, the greater the use to which he can put his own resources.

PREVENTIVE PSYCHIATRY AND
THE GENERAL PRACTITIONER

The social role of the family physician in the future is almost certain to become more and more one of a specialist in preventive medicine. The other specialists will continue to be preoccupied with the complicated and more serious pathologic conditions, while the GP will be increasingly more involved with keeping people in good health. This trend is rapidly developing, and, already, we see the pediatrician (the children's GP) being largely concerned with preventive medicine.

The white hope of psychiatry lies in the nature and degree to which the GP takes over the all-important job of prevention of psychiatric problems in his patients. Only through the development of large-scale moves by the GP in this direction can we psychiatrists see any chance of there being a sufficient reduction in the number of psychiatric patients for us few specialists to be able to handle adequately.

What has been presented here is a suggested approach to the realization of this hope. In the first place, when the GP becomes more positively oriented to good health and more active in finding ways to maintain it, then he will be creating for himself a unique role in the field of medicine where he will find no competition from the specialists. In the second place, he can most successfully find ways of keeping his patients out of the hands of us psychiatrists by helping them find better, happier, more rational, more responsible ways of living. Under the old concepts of mental illness, no effective philosophy of prevention could be derived from the theories of etiology. Seeing psychiatric problems as the end results of irrational ways of living, however, suggests a logical method of prevention.

Journal Editorial on Work for Heart Patients—Common sense and observation are the only basis on which a doctor can decide whether a heart attack victim should return to work.

In spite of all the material written and all the advice given, there is no way in which the doctor can tell if his patient should return to work except through his own "common sense and clinical judgment," according to a guest editorial in the February 7 Journal of the American Medical Association.

Dr. Leonard J. Goldwater, Columbia University, New York, said interest in occupational activities for cardiac patients seems to be at an all-time high. Most studies indicate that most cardiac patients can safely return to work. Only a few need changes in occupation.

Before the doctor can decide about his individual patient, he must take a number of features into consideration. They include, according to Dr. Goldwater, the patient's age, and previous occupational activity, the cause of his heart disease, the nature of the heart condition, the need for and response to treatment.

"Knowledge of the physical and emotional stress of the patient's job obviously constitute an indispensable part of the evaluation," he said.

VESICORECTOSTOMY: A MEANS OF URINARY DIVERSION

THOMAS H. WILLIAMS, JR., M. D., F. A. C. S.

Montgomery, Alabama

The purpose of this presentation is not to introduce a new idea or technic but to call attention to a means of urinary diversion that is often overlooked. Emphasis on this particular operation was stressed by Moore in 1953. Since then, the literature has not revealed extensive research or attention to vesicorectostomy. As we have observed the development, over the years, of means of urinary diversion, I think one conclusion is evident. A safer method is needed. Many different technics for ureterointestinal anastomosis have been devised, yet the outlook for longevity without severe renal damage is poor. Although ingenious substitute bladders have been devised, using ileal or rectosigmoid pouches, they have not proved to be satisfactory. Ureterocutaneous anastomosis inevitably leads to renal damage due to stricture and infection. Pyelonephritis, renal calculi, hyperchloremic acidosis, and uremia have often been the sequelae of the above procedures.

During the past ten years, interest in another means of urinary diversion, vesicorectostomy, has been initiated by the original work of Moore. He devised an operation that actually created an artificial opening between the bladder and the rectum simulating a cloaca. Later, Drs. Boyce and Vest reported a similar operation. Since then, the operation has proved to be useful in patients who have had strictures and periurethral fistulae difficult to manage with dilation or excision, in urethral carcinoma, in incontinence due to urethral sphincter damage, in contracted bladders following severe infections such as tuberculosis or chronic interstitial cystitis, and in those patients with extensive damage to the urethra due to injury, and in exstrophy of the bladder.

Technic: Some operators have preferred to use a two-stage procedure but we experience no difficulty in completing the operation in one stage. Bowel sterilization is advisable, and enemas, until clear, are given the night before and on the morning of surgery. The bladder is exposed through a transverse suprapubic incision and opened to expose the trigone. Ureteral catheters are passed up both ureters and left indwelling. Bimanual palpation of the proposed site of the anastomosis is now done to insure good approximation of the rectal wall and the base of the bladder. If there is any doubt regarding the presence of a loop of bowel in the space between the rectum and the

bladder, it is much wiser to open the peritoneum and pack the bowel away from possible injury. A large sigmoidoscope is inserted into the rectum by an assistant and angulated so that the beak of the instrument elevates the trigone. At this point, fixation sutures of No. 0 chromic are taken around the site of anastomosis and include the rectal wall as well as the bladder. An incision is then made exposing the sigmoidoscope beak, and bladder mucosa and rectal mucosa are approximated with chromic No. 0 sutures, using the Millin needle. The ostium of the anastomosis is made as large as possible without injury to the ureters. A No. 36 mushroom catheter or large rubber tube is brought out through the ostium and anal orifice where it is anchored with a cotton suture. A colon tube is passed up the rectum above the site of the anastomosis and left indwelling. The urethral orifice is now closed with plicating sutures of chromic No. 0 and the bladder is closed tight with two layers of chromic No. 00. A Penrose drain is brought out through the suprapubic incision and closure is accomplished in the usual manner.

A liquid diet is maintained for 5 to 7 days and the catheter is removed on about the tenth day. A high fluid intake and fecal softeners are insisted on. The patients are seen at monthly intervals and the ostium dilated with metal sounds or the index finger until patency is assured. All of these patients will bear close observation for the remainder of their lives.

Case Report: No. 9445, B. P., a 59-year-old Negro male who had been followed for three years because of multiple fistulae and severe strictures of the urethra. He had a permanent suprapubic cystostomy that required changing of the catheter once every month and was complicated by frequent formation of bladder stones. His stricture was impossible to manage on dilation and he was uncomfortable most of the time. A vesicorectostomy was done, using the above technic, and his postoperative course has been very smooth. He is now eight months postoperative and is very happy. He voids through the rectum every three or four hours and has a normal bowel movement daily. No complications have occurred.

We have tried this operation in two other patients, one successfully and one a technical failure due to severe subtrigonal induration and prostatic enlargement. Moore reported a five-year follow-up on his patients and states that there has been no evidence of upper urinary tract damage or infection. Proper selection of patients is important. Ureteral reflux, if present, will lead to progressive

Read before the Alabama Surgical Section of the United States Section of the International College of Surgeons, Mobile, Oct. 3, 1958.

upper tract disease in most instances. The presence of a large subtrigonal prostate or extensive induration involving the prostate and base of the bladder will make the procedure more difficult technically. The anal sphincter must be competent. The absence of rectal lesions is important.

This operation has the advantage of diverting the urinary stream without disturbing the ureters. It is technically less difficult and carries less operative risk and morbidity than the other diverting procedures. The problem of reabsorption of electrolytes with hyperchloremic acidosis has not been experienced with this operation as with uretero-intestinal anastomosis. Upper urinary tract infec-

tions are not a consequence of this operation as they are in other means of diversion.

In conclusion, a means of urinary diversion has been presented that has been successfully used over a period of ten years in selected conditions. I think it offers an excellent solution to some of our most difficult urologic problems.

1235 Forest Avenue.

REFERENCES

- Boyce, W. H., and Vest, S. A.: J. Urol. 67: 503-517, 1952.
Higgins, C. C.: Am. J. Surg. 22: 207, 1933.
Moore, J. G.: J. Urol. 72: 840-848, 1954.

PROGRESS IN MEDICINE

PRESENT STATUS OF DRUG THERAPY IN RHEUMATOID ARTHRITIS

PART II

HOWARD L. HOLLEY, M. D., STEPHEN L. STIGLER, M. D.,
JOHN M. McMAHON, M. D.,
and
ROBERT S. HOGAN, M. D.
Birmingham, Alabama

PHENYLBUTAZONE

This drug possesses analgesic, antipyretic and anti-inflammatory properties. It has been used with favorable therapeutic results in rheumatoid arthritis; however, it is merely palliative, not curative, and must be continued indefinitely. Its place as a therapeutic agent, however, still awaits final evaluation. The high degree of toxicity has prevented its general acceptance for chronic diseases requiring prolonged administration.²¹ Toxic reactions, such as bone marrow depression, which may be serious and even fatal, have been observed in as high as 40 per cent of patients receiving large doses of the drug. Evidence of water retention is frequently seen but is of little consequence other than in those individuals with cardiac or renal disease. Fortunately, toxicity is decreased when smaller daily doses are prescribed. Evaluation of long-term administration in peripheral rheumatoid

arthritis has not been encouraging. Although it is originally beneficial, its effect frequently wanes with continued use. Rheumatoid spondylitis may respond more satisfactorily to its use than the classical peripheral arthritis. Apparently the drug does not mediate its effect through the adrenal cortex; thus, it does not cause potassium diuresis, eosinopenia, increased ketosteroid excretion, or ascorbic acid depletion in the adrenal gland.

Phenylbutazone is available in 100 mg. tablets for oral administration. It is administered orally in 100 mg. doses three or four times a day. Smaller maintenance doses may be possible.

The drug is contraindicated in patients with cardiac and renal diseases, those with blood dyscrasias, those with a history of allergy, those with a peptic ulcer, and in the presence of dermatitis. A complete blood count, urinalysis, and stool for occult blood should be performed once weekly for the first three months and thereafter on a biweekly basis. With small doses the frequency of these examinations may be decreased.

HYDRAZIDES

The administration of iproniazid to patients with rheumatoid arthritis is often followed by a generalized sense of well being, increased appetite, a resultant gain in weight, and a decrease in the characteristic fatigability. The results from the administration of isoniazid are less pronounced than those obtained with iproniazid, and when improvement occurs it is slow and undramatic. Although

This study was made possible by grants from the National Institute of Arthritis and Metabolic Diseases, NIH, USPHS and the John R. Irby Fund for the study of arthritis.

Section on Rheumatic Diseases, Department of Medicine, Medical College of Alabama, and the Rheumatic Disease Clinic, University Hospital and Hillman Clinic, Birmingham, Alabama.

Part I appeared in the February 1959 Journal, as did bibliographic references 1 through 20.

21. Kuzell, W. C.; Schaffarzick, R. W.; Naugler, W. E., and Champlin, B. M.: Phenylbutazone; Effects of its Administration for Prolonged Periods, New England J. Med. 256: 388-392, Feb. 28, 1957.

the subjective improvement is usually remarkable, objective improvement in the joint and other musculoskeletal manifestations are not consistently found.²²

The mode of action of these drugs is not known. It has been suggested that they inhibit liver function, probably decreasing the inactivation of the cortisone drugs. This possibility has yet to be confirmed. The hydrazides' action may be related to alteration of the body enzyme system, but the exact mechanism remains undefined.

The drug (iproniazid) is usually administered orally, 25 mg. three times daily for from one to three months, after which time the dosage is gradually reduced to 25 mg. daily or every other day. Improvement usually is apparent within 3 to 10 days. It should be emphasized that the dosage has to be individualized to decrease the occurrence of side reactions.

The side effects of the drug may be such that its use may be interdicted. Constipation, fever, light-headedness, postural hypotension, dysuria, loss of libido, muscular irritability, hyperactivity of deep reflexes, clonus, paresthesia, nervousness, excessive dreaming, and insomnia may be annoying side effects. A vitamin B deficiency syndrome has been observed.

A "withdrawal syndrome" may occur with sudden discontinuance of the drug after prolonged administration which is characterized by irritability, restlessness, excessive dreaming, headache, vertigo, and nausea. These symptoms are more pronounced after iproniazid therapy. The symptoms usually appear promptly after discontinuance of the drug and disappear in 10 days to two weeks. It has been recommended also that 10 to 25 mg. of pyridoxin (vitamin B-6) be administered daily in order to prevent the occurrence of peripheral neuritis. The development of severe side reactions such as clonus is an indication to reduce the dosage or discontinue the drug altogether. There usually is an initially slight decrease in the hemoglobin concentration which subsequently returns to or exceeds the original value even though the drug is continued. Uncommonly a maculopapular skin eruption may appear which promptly disappears after discontinuance of the drug. Severe generalized edema has been observed. Jaundice may develop, especially in those patients with prior liver damage.

Contraindication: The hydrazides are contraindicated in patients having hepatic disease, severe anxiety states, epilepsy, and alcoholism.

Combination Therapy: Iproniazid has been

22. Scherbel, A. L.: III. The Effect of Isoniazid and of Iproniazid in Patients with Rheumatoid Arthritis, *Cleveland Clin. Quart.* 24: 98-104, April 1957.

administered in combination with the adrenal cortical steroids. Although such a combination has proved effective, no synergistic action has been observed. Most patients gain weight and develop a Cushingoid appearance despite the relatively small doses of corticosteroids being used.

THE ANTIMALARIAL DRUGS

Following a chance observation made by Dr. A. S. Alving during an intensive antimalarial study, an investigation was conducted and reported in 1951 with certain antimalarial drugs to determine their action in rheumatoid arthritis.²³ Quinacrine was originally used but it had the disadvantage of being poorly tolerated and frequently discolored the skin. Subsequently, *chloroquine phosphate** received extensive study in the treatment of this disease by many investigators in this country and abroad.²⁴ Likewise, *hydroxychloroquine sulfate*** has been used with similar therapeutic benefit.

The mechanism by which the antimalarial drugs produce salutary results in suppressing or inducing remission of the inflammatory process in rheumatoid arthritis has not been fully established. Haydu, in 1953, advanced the possibility that the antimalarials may act by means of adenosinetriphosphatase (ATP-ase) inhibition.²⁵ It had been suggested earlier that in rheumatoid arthritis the tissue requirements for adenosinetriphosphate were increased. Furthermore, gold and copper which are used in the treatment of rheumatoid arthritis have been reported as ATP-ase inhibitors, and drugs of the quinine group have shown ATP sparing action. These findings made the ATP-ase inhibition theory appear plausible.

Haydu treated 29 rheumatoid patients over a six months period and found that considerable improvement occurred in 21, complete remission in 1, symptomatic improvement in 5, and no change in 1. He administered 500 mg. of chloroquine three times weekly without noting any toxic effects in the entire group.

Rinehart et al., Parr and Freedman have all re-

23. Brennecke, F. E.; Alving, A. S.; Arnold, J.; Bergenstal, D. M., and DeWind, L. T.: A Preliminary Report on the Effect of Certain 8-Aminoquinolines in the Treatment of Rheumatoid Arthritis, *J. Lab. & Clin. Med.* 38: 795-796, Nov. 1951 (Abstract).

24. Rinehart, R. E.: Chloroquine Therapy in Rheumatoid Arthritis, *Northwest Med.* 54: 713-715, July 1955.

25. Haydu, G. G.: Rheumatoid Arthritis Therapy: Rationale and Use of Chloroquine Diphosphate, *Am. J. Med. Sc.* 225: 71-75, Jan. 1953.

*Aralen phosphate—Winthrop Laboratories, New York, N. Y.

**Plaquenil sulfate—Winthrop Laboratories, New York, N. Y.

ported good results from the use of this drug.^{26,27,28} Perhaps the most significant long range investigation was by Bagnall.²⁹ In his series of patients, chloroquine produced a successful response in 71 per cent of 108 patients with rheumatoid arthritis and in 71 per cent of 17 patients with spondylitis. Subjective response rarely was noted as early as two to twelve weeks. A maximum response, according to this investigator, may require from six to twelve months of therapy. The study included observations over a four-year period, with an average duration of therapy of thirty months. Remissions after therapy was withdrawn were maintained for as long as twelve months in 9 of 21 patients. Individual variations occur in patient response.

Toxicity: Toxic effects from chloroquine are usually mild and transitory in nature, disappearing completely either on continuance or after reduction or stopping the drug. Gastrointestinal disturbances (e. g., nausea, rarely vomiting, diarrhea, abdominal cramps, anorexia) are frequent manifestations of intolerance to these drugs. Temporary blurring of vision (due to interference with accommodation) is also relatively frequent. Occasional pleomorphic skin eruptions (e. g., lichenoid, maculopapular, purpuric), although generally mild, may preclude the use of an optimum dosage schedule. If a skin reaction persists on a reduced dosage schedule or recurs after reinstitution of treatment with gradually increasing doses of the drug, the drug should be discontinued.

Less frequently, transitory vertigo, headaches, lassitude, or neurologic disturbances, such as nervousness, insomnia, irritability, emotional change and nightmares, have been reported. Instances of unexplained slight, gradual weight loss as the patient's general health and arthritic condition improved have been mentioned. Occasional instances of bleaching (depigmentation) of the hair have been described. Although an occasional instance of leukopenia, with normal differential count, has been reported, it has not proved troublesome because it has always been reversible on discontinuance, or even after reduction of the dose.

26. Rinehart, R. E.; Rosenbaum, E. E., and Hopkins, C. E.: Chloroquine Therapy in Rheumatoid Arthritis, *Northwest Med.* 56: 703-705, June 1957.

27. Parr, L. J. A.: Recent Advances in Arthritis, *M. J. Australia* 2: 358-363, Sept. 3, 1955.

28. Freedman, A.: Chloroquine and Rheumatoid Arthritis; A Short-term Controlled Trial, *Ann. Rheumat. Dis.* 15: 251-257, Sept. 1956.

29. Bagnall, A. W.: The Value of Chloroquine in Rheumatoid Disease; A Four-year Study of Continuous Therapy, *Canad. M. A. J.* 77: 182-194, Aug. 1, 1957.

The drug is cumulative in action and will require several weeks to exert its beneficial therapeutic effects, whereas minor side effects may occur relatively early. Fortunately, these are often transitory and may disappear on continued therapy. A reduction of the total daily dose or substituting hydroxychloroquine may eliminate or allay the toxic effects. In a small percentage of patients some side effects may require withdrawal of the drug for several days until they subside; then, treatment should be reinstated with 125 to 250 mg., as is tolerated.

Dosage: The usual adult dose of chloroquine phosphate is 250 to 500 mg. daily as a single dose usually given at the evening meal. The drug is available in 250 mg. tablets. A larger dose of hydroxychloroquine may be necessary; the usual dose is 400 to 800 mg. Patients usually tolerate hydroxychloroquine better than chloroquine phosphate.

At least from 4 to 12 weeks of therapy are required before effects can be properly evaluated. If a good response is obtained, the dose is continued at a level of 250 to 500 mg. daily.

Contraindications: Chloroquine is known to concentrate in the liver and, although liver damage has never been reported, the drug should be used with caution in the presence of liver disease.

In patients with severe gastrointestinal, neurologic or blood disorder, the drug should be used with caution, or not at all. If such disorders occur during the course of therapy, it should be discontinued. Concomitant use of gold or phenylbutazone should be avoided because of the tendency of all three agents to produce drug dermatitis.

SUMMARY

A short review of the present concepts of drug therapy of rheumatoid arthritis has been presented. It can be seen that treatment of this complex systemic disease still is not specific; however, many adjuncts and aids in alleviation of the symptoms of the disease are now available. The importance of time-tested basic concepts of treatment of this disease, such as local and general rest, prevention and correction of deformities, physiotherapy, avoidance of emotional stress and proper nutrition, cannot be overemphasized. Improvement in the disease may result from these measures alone.

Chronic Brucellosis Called Emotional Illness—

"Chronic brucellosis" consists essentially of an emotional illness, a group of Johns Hopkins University researchers believe.

Brucellosis, also called Malta or undulant fever, is an infection characterized by tiredness, fever and body aches. Caused by *Brucella* organisms, it is usually acquired from cattle, hogs, sheep or goats.

The Johns Hopkins men, writing in the February Archives of Internal Medicine, published by the American Medical Association, said brucellosis is usually a self-limiting disease. Most patients are well and symptom-free within a year after the acute attack, although brucellosis is commonly considered to be a chronic disease that may persist for years.

When this happens, the Johns Hopkins men believe, the condition results from emotional factors rather than physiologic ones.

Of 24 patients who had had brucellosis four to six years before the study, eight were fully recovered; six had had "chronic brucellosis" for a while but were recovered, and 10 still had "chronic brucellosis."

Careful physical and laboratory examination showed that the patients with "chronic brucellosis" could not be distinguished from those who had recovered uneventfully after the acute attack. The two groups were identical with regard to severity, course, and treatment of the acute disease. No evidence of persistent infection with the *Brucella* organism could be found in the chronic patients.

However, the chronic patients continued to show physical symptoms even though there was no physiologic reason for them. Their symptoms were nonspecific—fatigue, headache, "nervousness" and depression—much like those appearing in neurotic persons.

Psychologic tests and psychiatric interviews revealed that the chronic patients had considerably more emotional disturbance than did the recovered patients. The majority of the chronic patients appeared depressed and anxious.

Most of the chronic patients had had emotional difficulties in childhood, and had been experiencing significant stresses of some sort during the period they were acutely ill. The recovered patients had not undergone such stresses, the doctors said.

They concluded that emotional disturbance was "significantly more prevalent" in the chronic patients and that their "disease" was primarily emotional.

The doctors explained that symptomatic recovery from acute brucellosis "depends critically on the emotional state of the person at the time of acute infection or in the convalescent period. In the wake of an acute *Brucella* infection there is almost always a period of lassitude or fatigability. In the depressed patient these otherwise transient symptoms merge imperceptibly with depressive fatigue or lassitude and thus appear to be perpetuated.

"The manifestations of the patient's emotional disturbance thus become included by the patient, and often by his physician, in the syndrome of 'chronic brucellosis'."

The reputation of brucellosis as a chronic disease supports the patient's tendency to retain his symptoms for long periods of time. In addition, "chronic brucellosis" offers a readily available explanation for any discomfort that occurs.

The authors are John B. Imboden, M. D., Arthur Canter, Ph.D., Leighton E. Cluff, M. D., and Robert W. Trever, M. D., of the departments of psychiatry and medicine at Johns Hopkins University School of Medicine and the Johns Hopkins Hospital, Baltimore.

Fall Prevention Rules Listed for Aged—Falling is one of the commonest but most unnecessary hazards faced by older persons.

Hundreds of thousands of old persons are injured every year from falls, and more persons die after 65 from falls and their complications than from auto accident injuries, according to an article in the February Today's Health, published by the American Medical Association.

The article listed some of the major causes of falls and the ways in which they can be prevented.

One of the major factors in falls is that as persons age their balance-recovery machinery fails. If a person starts to "teeter," certain muscles in his body instantly go into action to keep him on his feet. But in the older years, these muscles get lazy and don't function as rapidly.

Some of the most common causes of falls and their preventions are:

—Stairways. When an older person goes up or down stairs, he should not take one step with each foot, but should put both feet on a step before proceeding to the next one.

—Insufficient light. Older persons don't see as well as they once did. Stairways especially should be lighted. A night light in the bathroom is recommended. In addition, a person should keep a flashlight by his bed to use if he gets up in the night.

—Bedrooms. The most dangerous room in the house is not the kitchen but the bedroom. This is where most elderly persons fall, often because they get up too quickly and become dizzy. When a person gets up, he should sit on the edge of the bed for a few minutes.

—Bifocal glasses. These are especially dangerous when a person goes downstairs, since he may look through the lower lens and the steps become blurred.

—Taking a step backwards. If a person feels uncertain about his footing, he should never step backwards unless he can see where he is going.

—Not lifting feet high enough. As a person ages, his muscles and ligaments are less lively and he doesn't lift his feet as high, with the result that he trips over all sorts of small things—rug corners, toys, thresholds and doormats.

—Ice. When the sidewalks are slick, a person should stay indoors. If he must walk on ice, he should use a flat-footed shuffle, keeping his weight forward.

—Bathrooms. A rubber suction mat in the tub is a must for tub or shower. In addition, grab-bars installed on the wall in the right place by the tub or shower can prevent falls.

—Climbing on chairs. Some older persons won't admit they're old and insist on climbing on chairs and tables. These are dangerous.

In addition, there are dozens of other things that contribute to falls, including escalators, poor housekeeping, high bus steps, shiny, slippery floors, and throw rugs that slide.

The article urged all persons to learn to walk properly and to arrange their environment so they won't fall. In conclusion, it listed three rules for helping people to stay on their feet in old age: start studying "senior-age safety" early; keep your weight down, and keep in good physical condition.

The article was written by Edward D. Fales, Jr., Lime Rock Station, Conn.



U. S. DRUG RESEARCH SETS WORLD HEALTH STANDARDS

Scientific imagination and vast expenditures for research and development by the pharmaceutical industry have secured world leadership in health for the United States.

Expenditures for medical and drug research of the pharmaceutical and medicinal chemical industry reached an all-time high of \$170,000,000 in 1958, it was revealed by the Health News Institute. The industry spent \$127,000,000 in 1957.

The figures were disclosed by a survey conducted by the Pharmaceutical Manufacturers Association, with headquarters in Washington, which reported that in 1958 the ethical pharmaceutical industry poured back about seven per cent of its total sales into research and development. The industry supported medical schools, hospitals, and allied institutions, or financed medical research in them, to the extent of \$20,560,000 in 1958.

"Prior to World War II much of the initiative in medical and drug research was outside the United States and many of our medicines were imported," Chet Shaw, Executive Vice President of the HNI said. "However, the last two decades have seen the American system of free enterprise and vigorous business competition snatch world leadership away from other countries in the business of health improvement. We lead the world in our high health standards, due to the scientific imagination and dynamic leadership of the pharmaceutical industry in this country."

Pointing out that the drug industry is keeping pace with the expanding population not only of the United States but also the world, Shaw said, "The PMA survey reveals that the pharmaceutical industry has increased its research and development spending some 30 per cent over 1957 in the last year. Some \$190,000,000 is budgeted for 1959, and it may well exceed that figure when final tabulations are made."

The ethical drug industry spends more than twice as much each year on medical research as philanthropic institutions, colleges and universities combined, and more than half as much as the federal government, the HNI reports. Industry in general in this country spends approximately two

Editorials

per cent of sales for research, as compared to the seven per cent spent by the pharmaceutical industry.

Such expanded research results in some 400 new pharmaceutical products being made available to the medical profession each year as weapons against infectious disease, to relieve suffering, and for a longer and healthier life. For example, since 1900, the life expectancy at birth, in this country, has increased approximately 20 years, infant mortality has been more than cut in half, maternal mortality has decreased to the lowest rate in the world, and some infectious diseases have been wiped out completely.

NURSING RECRUITS REACH NEW HIGH

Admissions to schools of professional and practical nursing reached a new high in 1958, according to the Committee on Careers, National League for Nursing, New York. An estimated 46,600 students entered basic professional nursing schools, compared with 44,281 the preceding year. Some 20,000 began training for careers in practical nursing, compared with 16,710 the year earlier.

John H. Hayes, chairman of the committee, which spearheads national information activities for careers in nursing, points out that these admission records for nursing schools indicate several factors may be operating to help ease personnel shortages in nursing. These are a slight population increase in the teenage group eligible for professional nursing, an increasing number of schools of practical nursing, and the growing effectiveness of community nursing information programs throughout the country.

For instance, 1958 saw a beginning upturn in the 17-year-old female population to 1,167,000 compared with 1,124,000 in 1957, and 1,101,000 in 1950, according to estimates of the National Bureau of Vital Statistics. Admissions to schools of practical nursing were estimated for 587 schools, compared with 432 practical nursing schools reporting admissions for the preceding year. Currently every state has an active nursing career information program, and these are being reinforced more and more by city, county and area recruitment activities for nursing, according to Mr. Hayes.

Among professional nursing schools, diploma nursing programs in hospitals and independent schools showed the largest numerical new student gain, rising from 36,318 in 1957 to 38,550 in 1958. These programs accounted for 82.7% of the new nursing students in both years. Basic college programs leading to a bachelors degree in nursing rose in admissions from 6,893 to 7,250, or 15.6% of the total admissions in each year. The newer junior and community college nursing program, usually two years in length, showed a slight gain from 770 to 800 new students, or 1.7% of each year's total admissions.

Nursing education programs accredited nationally by the National League for Nursing continued in 1958, as in several years past, to attract the large majority of new students, 82% of those entering schools reporting in the survey going into fully or provisionally accredited programs.

Admissions estimated for professional schools are for the calendar year 1958, for practical nursing schools for the academic year 1957-58. The 1958 figures are estimated by projecting returns from the majority of schools to the total number of schools. The 1957 figures are actual admissions.

The Committee on Careers is jointly sponsored by the American Hospital Association, American Medical Association, American Nurses' Association and the National League for Nursing, and its program is supported also by the Sealantic Fund and The National Foundation.

THE CUTTER CASE

The American College of Physicians has joined Cutter in appealing the decision of January 17, 1958 of the Superior Court in Alameda County awarding two children, Anne Elizabeth Gottsdanker and James Randall Phipps, damages for polio infections allegedly resulting from the use of Cutter vaccine despite the jury's finding that Cutter Laboratories was not negligent.

In its amicus curiae (friend of the Court) brief, it points out that "the creation of an absolute liability concept would greatly impair future progress. The introduction of new products and procedures would be stifled and mankind would be denied the continual advancement of medical science. . . . We believe that when, as in the cases before the court at this time, a biologic is made according to strict government specifications and complies with the best scientific and productive knowledge available, and when the manufacturer is absolved of all possible negligence by the jury, as this defendant was, no liability should be incurred when an injury occurs because of the user's own peculiar susceptibility or because of insufficient scientific knowledge at that time. To create such an absolute liability would be to saddle the

world of medical science with an unfair burden. . . . We in no way feel that we are over-dramatizing these results for it is clear that researchers would be unwilling to try new drugs on patients, practicing physicians would be afraid to avail themselves and their patients of the new wonder drugs, and pharmaceutical houses would not be willing to manufacture new products should this concept be applied, for it holds the defendant liable without fault and liable for the unknown."

"Since the fact is self-evident that certain treatments will save lives or alleviate suffering, it is unrealistic and unreasonable to say that there must be no unknown untoward effects. If we take this position, then the conquering of disease in the future will be far slower, as neither manufacturers nor insurance companies can afford to insure against the unknown and the unpreventable. Thus, the lifesaving drug or biologic that may save thousands of lives every year from cancer which might be available tomorrow would probably, under the absolute liability situation, be withheld for another ten years of testing and 'wait and see' and 'make sure' periods. To be sure, a statistically small number of hypersensitive or hypersusceptible individuals will thus be saved from harm, but in the meantime thousands who might otherwise live, or live without suffering, will necessarily be denied medical care.

"How can any scientist, physician, hospital or pharmaceutical producer become involved in any forward steps in medicine, no matter how surrounded by standards, if he is to be held responsible for knowledge that does not, and cannot, exist until the future unfolds?"

HEALTH INSURANCE FOR SENIOR CITIZENS

Seldom, if ever before, has medicine earned such a friendly press as greeted the action of the American Medical Association's House of Delegates at its Minneapolis meeting in December when it resolved that "the A. M. A., the constituent and component medical societies, *as well as physicians everywhere*, expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with modest resources or low family income."

To make such a program possible, the A. M. A. delegates realistically urged "that physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate."

Thus, American medicine has forthrightly accepted the challenge of the Forand Bill and acknowledged the special needs of our older citizens, many of whom are getting along on extremely modest retirement incomes.

The national association of Blue Shield Plans has responded promptly to the A. M. A. action. Its staff, under the direction of a special committee, is developing a pattern of coverage, payments and subscription rates that can be used by local Blue Shield plans in developing their local programs for senior citizens.

On the local scene, early in 1958 Blue Cross-Blue Shield of Alabama acted on this subject. Age limits on new members joining the plan were raised from a maximum of 65 to age 70.

The organization felt this would offer a new opportunity for coverage to many of Alabama's elderly people. The commercial insurance carriers ordinarily do not sell coverage to retired persons, much less on the same benefit and rate level as to younger applicants.

Under the Alabama Blue Cross-Blue Shield program, there is no age limit once coverage has been obtained by age 70. Retired persons found otherwise eligible are offered the popular new \$25 deductible plan for hospitalization. They may select either the \$200 or \$300 surgical rider, along with \$3 first day medical benefits. These medical and surgical benefits are of the customary indemnity type here in Alabama, rather than a *service* arrangement.

Each of us will have an opportunity to take part in this great professional enterprise, for it will be up to us, as individual physicians, to make good the A. M. A. pledge of helping the aged obtain health care. We will be called on for a new and crucial demonstration of the ability of our free profession to meet its collective responsibilities by voluntary action in a free society.

THREE-EIGHTHS OF AGED HAVE HEALTH INSURANCE

More than three out of every eight persons 65 or over in this country now have some form of voluntary health insurance, according to Health Information Foundation. The proportion of the aged population with such insurance increased about 50 per cent from 1952 to 1957.

In the January issue of its statistical bulletin, *Progress in Health Services*, the Foundation published first results of a study made in cooperation with the National Opinion Research Center of the University of Chicago. A random cross-section of the population 65 and over, 1,700 persons in all, were interviewed at length about such items as their health, living arrangements, and incomes.

Largely because of modern medical science, the number of aged persons in this country is increasing at a somewhat faster rate than the population at large. At present, the Foundation pointed out, there are an estimated 15 million persons 65 and

over in the U. S., and the number is expected to reach about 25 million by 1980.

Thirty-nine per cent of the aged carried some type of voluntary health insurance at the time of the interviews. Almost all the insured (at least 93 per cent) had hospitalization insurance, while two-thirds of the insured were protected against in-hospital doctor bills and 21 per cent were covered against physicians' out-of-hospital charges.

Three out of four insured persons bore the entire cost of the coverage themselves, at an average (median) cost of \$4 a month. Other sources of payment included present or previous employers, children or other relatives, and trade unions or fraternal orders.

Less than 3 per cent of those interviewed had tried to buy health insurance and been turned down, according to H. I. F. More than one-fourth of the uninsured had never thought of getting such insurance, while almost as many said they didn't want it. Thirty-four per cent of the uninsured said they couldn't afford it; 16 per cent said they didn't believe they were eligible for it.

The Foundation reported that two-thirds of the aged population said they would like insurance that covered all medical expenses. The median amount they indicated they were willing to pay came to \$5 a month.

Just over half the people in the 65-and-over group favored government insurance that would pay hospital and medical expenses. Among these, however, almost half wanted such insurance only for "needy" persons.

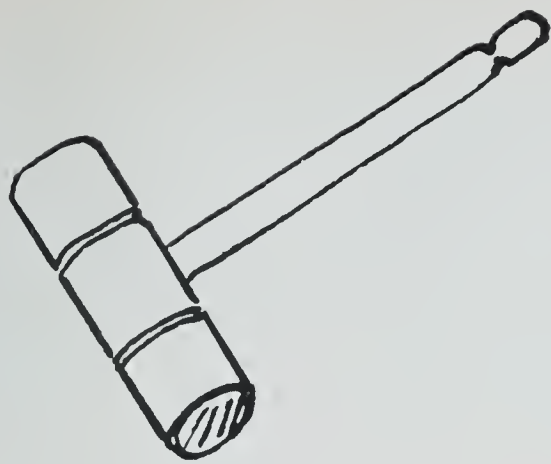
Although the number of aged persons covered by voluntary health insurance has increased significantly in the last few years, the Foundation report continued, further study in this area is needed—and other persons themselves must show greater interest in securing insurance.

"Plans for financing health needs of the aged may vary," the report stated, "but all should agree on one point: that a group of older persons responsible for their own health is an asset to society—and in keeping with present attitudes toward independent active later life for all."

ANNUAL SESSION

BIRMINGHAM

APRIL 9, 10 AND 11



President's Page

FEES

What to charge for his professional service can be one of the most perplexing problems a doctor has to solve. Certain factors that influence our thinking on medical fees and the cost of medical care seem fairly evident. From the layman's point of view illness usually comes as something unexpected and at times catastrophic. Paying for these unexpected illnesses can become a real burden to the head of a family. He may plan for annual physical examinations and preventive immunizations but paying the bills for an unexpected illness can be especially onerous. Again, from the layman's point of view he may look at the cost of medical care as a total expense. There is no gain-saying that it is high. Hospital expenses have mounted to almost astronomical figures. Nurses "around the clock" are not cheap. The great treatment and diagnostic procedures that have prolonged life and provided comfort so successfully are all expensive. The patient who spends 2 weeks in a hospital with three special nurses, is treated with an oxygen tent, has several transfusions, intravenous fluids, antibiotics, electrocardiograms, electrolyte studies and the like has incurred some real expense. The charge for his medical service is usually small compared to the above but when all the charges are added he has had a financial experience that is not pleasant. From the doctor's point of view he naturally wants to earn money and to provide for his family. His medical education has been expensive and required long years of hard work. A doctor rarely gets into practice before he is thirty. Of necessity his earning must be good during the remaining productive years. Also, to get into medical school he must have demonstrated an aptitude and intelligence well above the average of his fellow college students. When he gets into practice he finds that he must work much harder than most of his contemporaries in other professions and businesses. It does not seem unreasonable for him to expect a comfortable income. Today, medical practice does provide a comfortable income. A doctor cannot get rich in the practice of medicine. There are those that do have other business ventures on the side. Unfortunately, their practice as physicians usually suffers in direct proportion.

Accepting these rather obvious reasons why medical costs seem high and why doctors want to earn more, what should guide us in making charges for our services? Knowing and being close to the people we treat should provide the guide. The good doctor will not overcharge a man who is striving to provide for his growing family on a small income and is confronted with an unexpected medical expense. Often he may not want to make any charge at all. As a rule, he should make some charge, however small. Free service is often not as effective and as appreciated as when it is paid for. A doctor may know that a patient is wealthy and decide to charge a large fee. Rather than make this charge too large it might be wise to make it substantial so that the patient will feel that he has paid well for a service well rendered. Often the patient is wealthy because he has been shrewd and careful about financial matters. There may be a few doctors who attain a certain eminence and become a part of the current vogue by charging extremely large fees. Such vogues are notoriously short-lived. The specialist is at a particular disadvantage in arriving at a proper fee. The time and training required to attain his special knowledge makes it necessary for him to charge more for his service. Since his interest is limited to a particular part of a patient and since he usually sees him for only a short period, he often misses the patient's status as an individual. Missing the overall picture, he sometimes charges too much.

What should we do about the doctor who charges fees that are entirely out of line? Like the bad apple in every barrel there will always be an occasional doctor who abuses the privilege of our profession by charging exorbitant fees. As a profession we owe it to ourselves and the public we serve to exercise some restraint on these individuals. A grievance committee, properly run, can have a salutary effect. Not many doctors want to have their unreasonable charges aired before a group of fair-minded, outstanding members of their profession. Also, he has little chance of collecting a fee that has been judged excessive by responsible members of his own profession. Grievance committees are now operating successfully in several of the larger counties. Since the smaller counties may not have enough physicians to set

up a workable committee, it occurs to me that we should set up a state grievance committee to pass on those cases from counties where no committees exist. Finally, overcharging can be a real menace to our programs of voluntary health insurance. We look on these programs as our last defense against compulsory health insurance operated by the government. In these compulsory plans our right to charge what we think is a reasonable fee rapidly goes by the board. I guess all of us are inclined to charge a little more when we know an insurance company is getting the bill. We miss that contact with the patient himself which leads us to arrive at a proper and reasonable fee. If such charges became greatly excessive and widely

made, the voluntary insurance companies would find that they would have to raise their rate schedule to the point that they could not sell the insurance. It occurs to me that the insurance companies might properly bring those cases of flagrant violation of charging to our grievance committees for judgment. Again, I believe it would be a stabilizing influence.

Colgan J. Furber

Suicide May Result from "Psychic Homicide"—Many persons who kill themselves may actually be the victims of "psychic murder" committed by their friends or relatives, according to a New York psychiatrist.

The persons who commit "psychic homicide" are not yet legally held responsible, but theirs is a crime—a crime usually committed by omission, Dr. Joost A. M. Meerloo said in the February Archives of Neurology and Psychiatry, published by the American Medical Association.

"Psychiatrists agree," he said, "that punishment of parents or spouses or bosses is one of the most frequent motivations of suicide. This form of mental blackmail may be conscious in the suicide candidate or can be more subtly hidden behind many rationalizations."

But many other persons commit suicide because they are literally driven to it by someone with whom they identify. Dr. Meerloo said they commit suicide "because they were inadvertently aware of the wish or the command of their proxy that they had to die, though this 'homicidal' verdict had seldom been verbalized in a conscious way."

One case in which a person committed suicide on the unconscious demand of another person involved a man who refused to let his wife undergo treatment for a depressed state. He took a vacation with his secretary and his daughter, leaving his wife alone at home. After two days she committed suicide on his unconscious command. The husband remained unaware of his psychic murder.

Dr. Meerloo noted that the acting out of death wishes is usually not so obvious. However, the burden of inadvertent hostility and murderous wishes pushing those with weaker egos into depression and suicide is frequently seen.

"Especially in suicide by children," the author said, "we realize how much rejection, teasing and vituperation have to do with loss of self-esteem, and how these humiliations can drive the young person to suicide."

Dr. Meerloo related his concept of psychic homicide to that of brainwashing in which a person is made by another to believe, say and do things he himself would not ordinarily do.

In conclusion, he said, "In the age of encroaching technology and growing community pressure, resulting in weakening ego, decreased self-esteem, and diminishing personal responsibility, these unconscious attacks on a person's will and integrity become more and more relevant."

Skin Response to Pressure May Be Cause of Allergy—Patients whose patch tests show them to be "allergic to everything" may really just be reacting to the pressure of the patch.

Instead of having a sensitivity to specific agents, they may have dermatographia, defined by two Arkansas allergists as a whealing of the skin in response to injury.

Dermatographia may be demonstrated by stroking the skin with a blunt instrument, such as a paper clip or fingernail. A red line rises and the area begins to itch.

Whealing "is frequent, if not the rule" in children when their skin is stroked. It can be produced in almost any human skin by repeatedly stroking the same spot.

But there are some persons who react to just about any pressure on their skin. For instance, the doctors believe that many patients who say they are "allergic to wool" really have dermatographia and their sensitive skins are irritated by the rough fibers of the wool.

The doctors found in their practice that "patch tests for allergy to pure wool and to the wool in question showed negative findings in every case. In girls, wearing a cotton blouse under the wool sweater has solved the problem."

Redness and swelling frequently are caused by pressure from belts, girdles, shoulder straps, or suspenders.

Dermatographia may follow an intensely allergic reaction to drugs or a case of contact dermatitis, which appears to sensitize the skin to any pressure. Dermatographia may also occur without any previous sensitizing event.

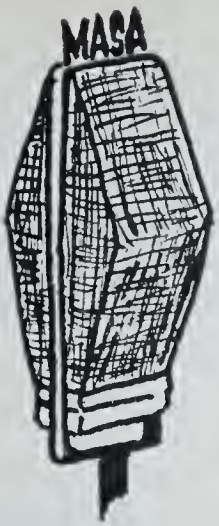
The cause is not known, but it appears to be related to the amount of histamine in the body. Histamine, a chemical that dilates the capillaries, plays a role in many allergies.

Antihistamines have been found to be helpful in controlling dermatographia, the doctors said in the January 3 Journal of the American Medical Association.

They noted that dermatographia is a common disorder and should be considered in any case of what appears to be unexplained chronic hives.

It is "disagreeable rather than dangerous," and patients should be assured that "it is not a manifestation of any organic disease, that there are no serious complications, and that the condition is usually self-limited."

The authors are Drs. Thomas G. Johnston and Alan G. Cazort, Little Rock.



ASSOCIATION FORUM

YOUR RED CROSS BLOOD PROGRAM ON THE JOB WHEN YOU NEED IT MOST

T. BRANNON HUBBARD, M. D.

Blood Program Chairman
Montgomery County Chapter
American Red Cross

The year 1958 marked the tenth anniversary of your Red Cross Blood Program, which evolved directly from the enormous success achieved by Red Cross in collecting blood for the armed forces during World War II. During the conflict, more than 13,000,000 pints of blood were collected for our military use. Red Cross and the nation's medical authorities agreed that this superb new way to save and protect life should be available to the American people in time of peace as well as in war.

Now, a decade later, 52 Red Cross Regional Blood Centers are in operation, with 1,500 chapters across the nation participating and serving 3,900 hospitals in our country. About 40 per cent of blood used annually in medical practice is provided through your Red Cross. The medical value of blood goes far beyond the restorative powers of whole blood transfusions. From outdated blood the Red Cross processes blood plasma, which has important medical properties. And from plasma are derived such valuable products as gamma globulin, serum albumin and fibrinogen. Over the 10-year period of the Red Cross Community Blood Program, vast quantities of these blood products, valued commercially at more than \$60,000,000, have been distributed in every state without charge to doctors and hospitals for treatment of patients.

Continuing research sponsored by Red Cross in the nature and properties of blood indicates the possibility of further lifesaving uses of blood and hitherto unknown derivatives. One of the latter is properdin, currently being used in cancer research.

Blood collected through Red Cross is a gift of volunteer donors. Therefore, no charge is made for the product itself to hospitals or patients. However, the steadily increasing cost of this highly technical and expensive program has made necessary the financial participation of hospitals in meeting some costs involved in the collecting, distributing, cross matching and administering of blood.

Here in Montgomery County, your Red Cross Community Blood Program, doctors and our hospitals meet the total blood needs of our people through a three-fold plan.

First, by urging one member of each family to donate one pint of blood every six months, or twice a year. This donation covers the total blood needs of the immediate family through a Red Cross donor credit card valid for a six-month period, regardless of the number of pints of blood the family may use.

Second, the doctors and hospitals are requesting all non-card holders to predeposit blood on scheduled hospitalization and surgery. Again, these predeposits cover the individual or family for a six-month period.

Third, in those emergency cases where non-card holders enter hospitals without a blood credit card or predepositing blood, the individual or members of the family are required to pledge replacement of all blood used on a pint for pint basis prior to leaving the hospital. Those persons replacing blood for members of their family or friends receive a blood credit card for a two-month coverage—shorter time coverage as one donation will be covering two individuals or families.

The purpose of our Montgomery County Red Cross Community Blood Program is to provide a continual blood supply in both type and quantity adequate to meet the civilian and military needs for the residents of the county.

The responsibility of our Red Cross Blood Program rests not only with the Red Cross, doctors and hospitals, but with our entire community and county participation.

This program is another fine example, on the job when you need it most, "Your Red Cross."

A CORRECTION

The Association Forum for January 1959 carried a reprint from *Health Bulletin for Teachers* entitled "Profile of the Practicing Physician." The Bulletin for Teachers is published by the School Health Bureau, Health and Welfare Division of the Metropolitan Life Insurance Company. The information was inadvertently omitted when the reprint appeared.



ORGANIZATION SECTION

COMMITTEE ON PUBLIC RELATIONS



Representatives of the State Medical Association and the Alabama Pharmaceutical Association who met for discussion of problems of mutual interest are pictured above. They are: L. to R.—Mr. Ed Scruggs, Anniston; Dr. L. R. Burroughs, Jr., Birmingham; Mr. Lester Thagard, Jr., Andalusia; Dr. L. G. Cole, Talladega; Mr. Maurice Alley, Birmingham; Dr. J. A. Martin, Montgomery; Mr.

E. W. Gibbs, Birmingham; and Mr. Roy Payne, Jasper. Details of the meeting will be reported in a subsequent issue of the *Journal*. The resolution printed below was passed by the Alabama State Board of Pharmacy on June 23, 1958, and the Association has been requested to publicize the resolution to its members.

INTER-PROFESSIONAL RELATIONSHIPS

A RESOLUTION

STATE OF ALABAMA
JEFFERSON COUNTY

A Resolution pursuant to Pharmacy Code of Alabama, Chapter 12, Title 46, of and by the Alabama State Board

of Pharmacy regulating the acceptance of unused portions of drugs and prescriptions by any licensed pharmacist or drug store within the State of Alabama and for other purposes incidental therewith.

“Be it resolved by the Alabama State Board of Phar-

macy in regular session assembled in Auburn, Alabama, June 23, 1958, as follows:

Section I. That from and after this date, it is hereby declared that it shall be unlawful for any licensed pharmacist or drug store operating within the State of Alabama to accept for refund purposes or otherwise any unused portion of any dispensed prescription.

Section II. The reasoning for the passage of the regulation set forth in Section I hereof being due to the fact that in the interest of public health that such drugs in all likelihood have become contaminated with communicable diseases and/or contagious diseases under the holder thereof and would tend to create a health problem if placed in reuse or stock by any licensed pharmacist or drug store.

Section III. Any regulation, or parts thereof, in conflict with this regulation is hereby repealed.

Be it so resolved by the Alabama State Board of Pharmacy in regular session held on June 23, 1958."

M. A. Boynton, President
Will H. Ryan, Vice-President
Monroe J. Newberry, Treasurer
George P. Walker, Jr., Member
Roy W. Payne, Member
E. W. Gibbs, Secretary

PHYSICIAN PLACEMENT

Approximately 40 senior students met with members of the Subcommittee on Physician Placement at the Medical College of Alabama in response to an invitation to learn about the placement services which are available through the Association. Information was presented and questions answered by Drs. J. Michaelson, Foley; R. O. Rutland, Jr., Fayette; W. C. Browne, Vincent; L. R. Burroughs, Jr., Birmingham; and B. V. Branscomb, Assistant Dean of the Medical College.

The group studied brochures on Alabama towns which are now seeking a doctor and learned how to obtain assistance from the Association when they are ready to choose their places of practice.

The Physician Placement Service has been under the direction of a subcommittee of the Committee on Public Relations since 1954. From that time to the present, 359 physicians have applied for assistance in obtaining locations. Of these 359 applicants, 133 have been placed in suitable locations in Alabama through the efforts of the placement service. Dr. Rutland is chairman of the subcommittee which handles this phase of the Association's work.

MEDICAL ASSISTANTS COURSES

Representatives of the State Medical Association and the University of Alabama are shown below at a planning meeting. A second course for Medical Assistants entitled "Medical Terminology" has been established and is being offered at University centers at Birmingham, Dothan, Florence, Gadsden, Huntsville, Mobile, Montgomery, Selma and Tuscaloosa. The course may be taken on a credit or a noncredit basis. It is offered jointly by the University of Alabama, The Medical Association of the State of Alabama, and the Medical Assistants Association of Alabama. The coordinators for the centers at which the course is available are: Dr. P. K. Burwell, Montgomery and Selma; Dr. Gordon King, Tuscaloosa; Dr. M. Vaun Adams, Mobile; Dr. N. E. Cowart, Huntsville; Dr. J. O. Finney, Gadsden; Dr. Sam W. Windham, Dothan; Dr. E. B. Glenn, Birmingham; Dr. H. M. Simpson, Jr., Flor-



Left to right: Mr. Gordon E. P. Wright, Director, Commerce Extension Services, University of Alabama; Dr. E. B. Glenn, Birmingham; Dr. J. Michaelson, Foley; Dr. Gordon King, Tuscaloosa;

Dr. George Campbell, Director, University Center, Mobile; Dr. Ralph Chermock, Extension Division, University of Alabama.

ence. Dr. J. O. Colley, Jr. heads the Association's subcommittee which is responsible for coordinating these courses.

MEDICAL REPORTER AWARD

The Committee on Public Relations has instituted a Medical Reporter Award to be presented to a reporter, editor or publisher of an Alabama newspaper for his accurate and factual medical news reporting of interest to the reading public. From zero to five such certificates will be awarded each year at the annual session of the Association, the first to be made in 1960. Rules and regulations governing the selection of the nominees have been established, and information is being disseminated by the committee. One of the purposes of the award is to encourage the continuous improvement of the caliber of medical news coverage in the state.

SECOND ATHLETIC INJURIES CONFERENCE DATES SET

The Second Conference on the Management and Prevention of Athletic Injuries, sponsored jointly by the State Medical Association, the University of Alabama, the Alabama High School Coaches Association, and the Alabama High School Athletic Association, will be held in the near future. The program will be expanded this year to include a panel discussion, question and answer period, workshop, film on conditioning, and a banquet. More than two hundred physicians and coaches attended the half-day session which was held last year. Watch for an announcement of the date and program of the conference.

MEETING WITH API ON COMMUNICATIONS

Pictured below are representatives of the State Medical Association and Alabama Polytechnic Institute, Auburn, who met at the request of the school to discuss problems which they have encountered in communication among physicians and between physicians and those in other professions. One of the purposes of the discussion was to gather material for the production of an educational TV program by the Auburn group. Announcement of the program will be made when it is scheduled to appear.

ESSAY CONTEST

Co-chairmen, Mrs. W. H. Rosser, Birmingham, and Mrs. J. O. Morgan, Gadsden, have announced that a total of \$3,000 in prizes will be awarded this year on a national and state basis in the annual essay contest for which the Woman's Auxiliary assumes responsibility.

High school students in the 10th, 11th and 12th grades are eligible for participation; the assigned subjects are "The Advantages of Private Medical Care" or "The Advantages of the American Free Enterprise System." The program originates at the county level and the 3 top-ranking essays are submitted to a state committee which, in turn, submits the 3 best essays from the state to a national committee. The deadline for entering the contest is very near; requests for information should be addressed to Mrs. W. J. Rosser, 2721 Hanover Circle, Birmingham, or Mrs. J. O. Morgan, Gadsden.



Left to right: Mr. John W. Dunlop, Program Director, Alabama Polytechnic Institute, Auburn; Dr. E. B. Glenn, Birmingham; Dr. J. Michaelson,

Foley; Dr. William S. Smith, Associate Professor of Speech, API; Dr. John Martin, Montgomery.

RURAL HEALTH COUNCILS

Three counties in Alabama have *active* rural health councils—Elmore, Shelby and Talladega. Four others are well on the way toward being organized for active work. The program is broad, encompassing the efforts of several allied groups in addition to the State Medical Association. For this reason certain counties were asked to set up pilot councils to test the program before it is launched in the 67 counties of the state.

The three established groups report orientation of their council members and activities in the following fields: beginning of a survey of rural homes, intensive polio vaccination campaign, rat control, skin tests for tuberculosis, education of rural people on what services are available, development of a health record for recording immunizations received by each member of a family—one copy for the family and one copy to be kept on record at the Health Department.

Dr. Paul Nickerson, Sylacauga, is chairman of the Committee on Rural Health which is coordinating the program and working toward the establishment of rural health councils in all counties in the state.

ANNOUNCEMENTS

ARCHIVE OF ALCOHOL LITERATURE AVAILABLE

The Commission on Alcoholism, State of Alabama, is now able to make the Classified Abstract Archive of Alcohol Literature available. The purpose of the Archive is to give easy access to any selected topic in the vast accumulation of published materials on alcohol problems. To this end the relevant literature is abstracted and classified by subject matter in a systematic way. The Alabama Commission on Alcoholism subscribes to the Classified Abstract Archive of the Alcohol Literature. Currently stocked are the 1954, 1955, 1956 and 1957 issues; an order has been placed for a complete backlog. Several copies of the Manual of the C. A. A. A. L., which contains a Dictionary of the Archive Code, have been ordered and will be presented as gifts to college libraries and made available to researchers.

In announcing the availability of the Archive, Mr. John L. Sanders, Educational Director, Commission on Alcoholism, State of Alabama, stated: "The only real barrier to an effective use of the Archive will be the ability of the researcher to define his topic properly. The more specifically a research topic is defined, the easier it will be to obtain the abstracts desired. The basic tool for this purpose is the Code Dictionary, which will be made available on request. Once a properly described request for abstracts is received, the proper

abstracts will be extracted with a key sort system, and thermofax copies will be mailed free of charge."

The Commission also will supply copies of the *Manual on Alcoholism*, published by the American Medical Association, free on request.

All communications regarding literature and Archive services should be addressed to: Commission on Alcoholism, 704 Washington Avenue, Montgomery, Alabama.

INTERNATIONAL COLLEGE OF SURGEONS TO MEET

The scientific programs of the International College of Surgeons, Alabama Surgical Section, will be held at the Russel Erskine Hotel, Huntsville, Alabama, May 21 and 22, 1959.

ALABAMA DENTAL ASSOCIATION

The Alabama Dental Association will meet at Birmingham, April 20-22, 1959.

Food Supplements Said to Be Unnecessary During Pregnancy—Expectant mothers generally do not have to resort to food supplements to obtain all the vitamins, minerals, and other nutrients needed during pregnancy.

These nutritional essentials are readily available from normal food sources, three Vanderbilt University researchers said recently.

Their conclusions are based on a study of 2,388 pregnant women and are reported in the December 20 Journal of the American Medical Association.

As a result of their study, William J. McGanity, M. D., Edwin B. Bridgforth, A. B., and William J. Darby, M. D., all of Nashville, Tenn., questioned the wide use of food supplements in the diets of expectant mothers.

They said that their study indicates no significant difference in the incidence of maternal or fetal abnormalities in women receiving supplements and those on a standard diet. The only exception was among women with iron deficiency anemia, the authors said. These women generally need supplementary iron.

They concluded that if a doctor feels his patient is not obtaining the necessary amounts of minerals or vitamins he should recommend dietary corrections before resorting to supplements.

Such supplementation, the authors said, should be used only to bring the patient up to accepted nutritional levels.

They further noted that their study does not provide evidence to indicate that dietary intakes greater than the allowances of the Food and Nutrition Board of the National Research Council, Washington, will bestow protective benefits during pregnancy.

"A diet that will provide the recommended levels of nutrients is readily attainable from food sources in all sections of the country without the need of supplementation," they concluded.



MEDICAL CENTER NEWS

RESEARCH AND TRAINING GRANTS OF MEDICAL CENTER NOW EXCEED \$1,000,000 ANNUALLY, REPORT SHOWS

Value of research and training grants and fellowships at the Medical Center each year now exceeds \$1,000,000.

Only three years ago this figure was \$359,000.

This 300 per cent growth in value of such research and training grants was revealed by Dr. Joseph F. Volker, Director of Research and Graduate Studies of the Center, as part of the report of the U. S. Department of Health, Education, and Welfare.

The report shows that the research and training activities at the Medical Center have grown so phenomenally that it now ranks with national leaders in these fields, Dr. Volker said.

"The University of Alabama," Dr. Volker explained, "was favored by being designated one of 20 U. S. medical centers to be studied for the impact of the various programs of the National Institutes of Health on growth of medical research."

As of December 1, 1958, Dr. Volker said, there were 103 active research and training grants in the Medical Center. Of these, 88 are classified as research grants. They come from 14 different granting sources, chief of which is the U. S. Public Health Service.

Fifteen training grants are designed to prepare promising young physicians, dentists and basic scientists for careers as teacher-investigators in various health fields.

Specific areas of training include psychiatry, neurology, endocrinology, cardiology, pathology, diabetes, epidemiology and dentistry.

The government survey also showed that eight medical and dental undergraduate students have received fellowship support to spend a year or more in full-time research activities. Fourteen others have fellowships for part-time research work.

Training grants and fellowships, the report showed, account for \$288,000 of the \$1,115,000 total. Research grants make up the remaining \$827,000.

LIBRARY OFFERS EXTENSIVE LIST OF BOOKS, JOURNALS

More than 65,000 books, all technical, are on the shelves of the Medical Center library which also subscribes to 870 different journals. Overnight

books were checked out 21,000 times last year. This figure does not include those that were read in the library. Last year, faculty and students used these books in gathering research material for publishing 278 articles in national journals.

The historical department of the Library has some very interesting reference material, including actual instruments used by pioneer doctors. One of the older surgical cases on display was used by Napoleon's Army in 1812. Another is the unique surgical instrument with push-pull razor blades for cutting the patient's flesh, used by the old-time "blood-letters." A War Between the States amputation case is on display which was used by Confederate Captain Charles Cook Harris, father of Dr. Seale Harris, prominent Birmingham physician.

Mrs. Sarah Brown, Chief Medical Librarian and Assistant Professor of Medical Library Science, has five full-time professional librarians on her staff, specializing in circulation, reference, cataloging, periodicals and historical.

SEVEN FROM CENTER NAMED TO WHO'S WHO OF AMERICAN WOMEN

Seven women selected for the 1958-59 and first edition of "Who's Who of American Women" are associated with the Medical Center.

In commenting on the selections, Vice President of the University for Health Affairs Robert C. Berson said:

"This is a signal honor for these women who are working in various capacities with the University of Alabama Medical Center. We are justly proud of their accomplishments which have led to this deserving honor. It is another indication of the recognition of our people and the institution they represent."

Dr. Polly Ayers, Assistant Professor of Preventive Medicine and Public Health. Dr. Ayers is the founder and first President of the American Society of Dentistry for Children, is the President-Elect of the Birmingham District Dental Society and Secretary-Treasurer of the American Association of Public Health Dentists.

Dr. Ruth Robertson Berrey, Associate Professor of Pediatrics. Dr. Berrey has been practicing in Birmingham since 1929. In addition to her staff position at the Medical Center, she is Consultant

on Pediatrics for the Jefferson County Health Department.

Mrs. Sarah Cole Brown, Assistant Professor of Medical Library Science. Mrs. Brown has been Chief Medical Librarian at the Medical Center since 1955. She received her B. A. degree from Hendrix College and her B. S. degree in Library Science from the University of Illinois.

Mrs. Kathryn McAllister Crossland, Director of Nursing at University Hospital. Mrs. Crossland has been Director of Nursing at University Hospital and Hillman Clinic since 1953. She is also Director of the Jefferson County Health Council, a member of the State Board of Nurse Examiners, the American Nurses Association and served as President of the Alabama Association from 1952 to 1956.

Dr. Martha Barker Green, Instructor in Gynecology. Dr. Green is a member of the American Board of Obstetrics and Gynecology and a Fellow of the American College of Obstetrics and Gynecology and, in addition to her staff position here, conducts a private practice.

Dr. Ruth Stillman Hare, Instructor in the Department of Pharmacology. Dr. Hare received her Ph. D. degree in pharmacology here at the Medical Center in 1955. She and her husband, Dr. Kendrick Hare, often find it possible to work together on research problems, since he is also a member of the Medical Center staff.

Dr. Alice McNeal, Professor and Chairman of the Department of Anesthesiology. Dr. McNeal has been, since 1946, Chief of Clinical Conduct of Anesthesia at the University Hospital and Director of the School for Nurse Anesthetists. She is a member of the International Anesthesia Research Society and the American Society of Anesthesiologists.

DR. WALTER B. FROMMEYER RECEIVES LEUKEMIA GRANT

Dr. Walter B. Frommeyer, Professor and Chairman of the Department of Medicine, recently received a grant from the National Institutes of Health in the amount of \$18,187 for research in the leukemia field. This is a one-year grant with a moral commitment for additional amounts for two more years.

Leukemia is only one of the types of cancer being tested by drugs here at the Medical Center and at eight other medical centers in the NIH program.

Dr. Frommeyer began his research for NIH two years ago and claims definite results in treating this fatal blood disease. Radioactive materials are also being tested, but Dr. Frommeyer says he has found drugs to be more effective for a general

cancer such as leukemia. Of the 20 drugs being tested, two are particularly promising, he said—Leukeran and Myleran—the first for lymphatic leukemia and the second for granulocytic leukemia. They affect the cancerous cells by altering their structure so that they cannot reproduce, he said.

“Results have been encouraging,” Dr. Frommeyer said. But the results by no means indicate that he has found a definite cure for leukemia. He will know more when the five-year testing period is up.

Working closely with Dr. Frommeyer are Dr. William J. Hammack, Instructor in Medicine, and Dr. M. L. Campbell, Research Fellow.

FORMER MEDICAL STUDENT NAMED AMONG TOP TEN IN COUNTRY

A former Medical College student, Dr. James T. Grace, Jr., was among 10 persons chosen by the U. S. Junior Chamber of Commerce as the outstanding young men of 1958.

Dr. Grace, now 35, took his first two years of study here, before going on to Harvard Medical School, from which he graduated. He returned to Alabama and practiced in Huntsville before going to New York to undertake a career in cancer research. He is devoting his life to cancer research, which he now conducts at Roswell Park Memorial Institute in Buffalo, New York.

Dr. Grace has described and confirmed the thesis that cancer patients retain a resistance to their tumors even when the disease becomes advanced. He is presently concerned with study of the immunologic reactions between the patient and his malignancy. He has also been working on the possibility of isolating subcellular particles (similar to virus) from human cancer.

The U. S. Junior Chamber of Commerce cited Dr. Grace for “his many hours in the laboratory beyond an ordinary working day and through week-ends” and said “this is a measure of the devotion to research which has resulted in important new knowledge directly applicable to the care and treatment of cancer victims.”

STAFF MEMBERS ELECTED TO COLLEGE OF PHYSICIANS

The Board of Regents of the American College of Physicians recently elected to full Fellowship in the College Dr. Arthur H. Owens and Dr. Thomas F. Paine, Jr., of the Department of Medicine. Dr. Owens is Clinical Assistant Professor of Medicine and Dr. Paine is Professor of Medicine and Director of the Infectious Diseases Division of the Department of Medicine.

At the same time, Dr. S. Richardson Hill, Jr., and Dr. Robert Steadham Hogan, both of the De-

partment of Medicine, were elected to Associate-ship in the College. Dr. Hill is Associate Professor of Medicine and Assistant Director of the Department of Medicine as well as Director of the Endocrinology and Metabolic Division of the Department. Dr. Hogan is Clinical Assistant Professor of Medicine and has been and continues to be extremely active in the Rheumatology Division of the Department.

DR. BERSON APPOINTED TO NATIONAL COUNCIL

Dr. Robert C. Berson, Vice President of the University for Health Affairs and Dean of the Medical College, was recently appointed to serve on the National Advisory Council on Health Research Facilities for the Public Health Service. Announcement was made by Surgeon General Leroy E. Burney of the Department of Health, Education, and Welfare.

As a member of this Council, Dr. Berson will advise and make recommendations to the Surgeon General on matters relating to the Federal program to strengthen the nation's capacity for medical research by constructing and equipping health research facilities.

NURSING STUDENTS GET SCHOLARSHIP

Nursing students of the University Hospital School of Nursing were assisted recently when the Jefferson County Medical Society Auxiliary gave a \$300 scholarship to the School. The nursing students will be able to draw funds from the scholarship to help them complete their courses. The Jefferson County Medical Society Auxiliary is accepting memorials and contributions to perpetuate the fund.

STAFF ACTIVITIES

Dr. S. B. Barker, Professor of Pharmacology, recently attended the National Research Council Postdoctoral Fellowship meeting in Washington, D. C.

Dr. William L. McCracken, Professor of Dentistry, will speak to the First District Dental Society Meeting in Mobile on February 2nd. His subject will be "Design of the Partial Denture."

Drs. Alexander Ulloa, William J. Hammack and Margaret Henry attended the recent meeting of the American Rheumatism Association held at Rochester, Minnesota. Dr. Ulloa presented a paper "Studies on the Adrenocortical Response to ACTH of Patients with Rheumatic Arthritis" which he co-authored with Dr. Howard L. Holley, Mattie Gautney, Willard R. Starnes and Dr. S. Richardson Hill, Jr. Dr. Hammack presented a paper, co-authored by him and Dr. Howard L. Holley, entitled "The Influence of Abnormal Proteins on

the Laboratory Tests Utilized in Rheumatic Disease."

Drs. Ward Pigman, Wolfgang Roth and Kazutosi Nisizawa attended the recent Southeastern Regional Meeting of the American Chemical Society held at the University of Florida in Gainesville.

As a representative of the International Association for Dental Research, Dr. Ward Pigman attended the recent Council Meeting of the American Association for the Advancement of Science in Washington, D. C.

Dr. Champ Lyons, Professor and Chairman of the Department of Surgery, was one of the session moderators at the recent Cancer Seminar held in Birmingham.

Matthew F. McNulty, Jr., Administrator, and Lawrence J. Dutel, Assistant Administrator, University Hospital, attended the 2nd Congress on Administration conducted by the American College of Hospital Administrators in Chicago from February 5th to 7th.

Dr. Arthur H. Wuehrmann, Associate Dean of the Dental School, was invited by the Societe Dentaire de Montreal to speak on "Radiation Hygiene" and "Roentgenographic Interpretation" in Montreal, Canada, on February 17th.

Dr. Wuehrmann also attended the Conference of the Chiefs, Dental Service, at the Veterans Administration Hospital in Atlanta, Georgia, on February 26th and 27th.

Dr. Ferdinand F. Schwartz, Associate Professor of Physical Medicine, was elected to the Executive Board of the American Institute of Ultrasonics in Medicine for 1959-60 at the recent Philadelphia meeting.

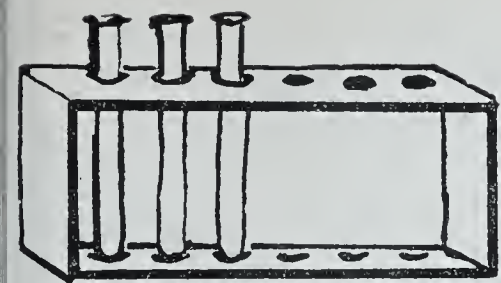
Job Transfer Is Only Treatment for Printer's Dermatitis—Job transfer is at present about the only treatment available for printers suffering from "chromate dermatitis."

Skin disease is an important occupational hazard of lithographers affecting from 5 to 10 per cent of those employed in the reproduction of colored photographs by high-speed printing presses.

Such skin disease, called "chromate dermatitis" because chromic acid derivatives are believed to be the major factor in the disease, is difficult to prevent and control, three Northwestern University Medical Center physicians said in the February 7 Journal of the American Medical Association.

In a study of 100 men, the doctors found that many chemicals, not just chromic acid derivatives, cause dermatitis. It takes about five years for a pressman, who uses many chemicals, to develop dermatitis, while it takes 15 for a platemaker, who uses only a few chemicals.

Protection from rubber gloves or creams has been found to be unsuccessful, mainly because their use makes the handling of materials cumbersome.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

THE MENTAL HEALTH PROGRAM

The State Health Department's Division of Mental Hygiene was established in September 1948 in conjunction with the Medical College of Alabama. Formation of the Division was stimulated by the passage, in 1946, of the National Mental Health Act which made federal funds available on a matching basis for use in state-supported mental health programs. The division began operations in the Jefferson County Public Health Building in Birmingham where it remained until 1954 when the offices were moved to Montgomery where all other divisions of the Health Department are located.

When the mental health program got under way, there was only one publicly-supported mental hygiene clinic in the state. This was the clinic of the Medical College and Jefferson-Hillman Hospital. Outpatient services were available at this clinic only two and one-half days each week. Immediate objectives of the division, therefore, included the expansion of the mental health services of the College and Hospital and the establishment of mental health clinics in communities throughout the state. The long-term goal of the division as a public health agency was, of course, the development of a program aimed at the promotion of mental health and the prevention of mental illness.

Considerable progress has been achieved during the 11 years of the division's existence. Currently, there are eight mental health clinics receiving financial support through the Division of Mental Hygiene. These clinics are located at Birmingham, Tuscaloosa, Muscle Shoals, Montgomery, Mobile, Gadsden, Huntsville, and Tuskegee. Services of these clinics are available to all residents of Alabama, not just those who live in cities where clinics are located.

One of the major functions of the clinics has been the early diagnosis of mental illness and emotional disturbance. The clinics do some treatment of such illness in its early stages. Where the clinic cannot offer treatment, persons are helped to accept and plan for treatment or are referred to other agencies or private practicing psychiatrists for help. A limited amount of psychologic testing,

guidance and counseling is undertaken. In 1958, over 2000 individuals with psychiatric problems were helped by these clinics. Staff members of the clinics also serve as public health educators in mental health in the communities in which they work.

The professional staff in the state office of the Division of Mental Hygiene now consists of the director; a clinical psychologist, who works out of Birmingham; and a research psychologist, a psychiatric social worker, and a mental health nurse consultant, all of whom work out of Montgomery. This personnel provides consultative services to the clinic staffs and works with other agencies and groups needing mental health services.

Both state and clinic staff members offer consultative services to other agencies who deal with people. Such agencies include schools, Departments of Pensions and Security, children's homes and juvenile courts. These staff members have also assisted community volunteer groups to organize mental health programs and have cooperated with the Alabama Association for Mental Health in training and orientation of state and local mental health association leaders.

The division performs other services such as conducting workshops and institutes to help parents, teachers, nurses, ministers, policemen and other groups to acquire specific skills in human relations. Such workshops and institutes are usually sponsored jointly with the Alabama Association for Mental Health and local mental health associations. Examples of services of this type are mental health institutes for classroom teachers which the division has co-sponsored for the past two summers. Other educational activities include the distribution of printed material, maintenance of a film library, and publication of a monthly bulletin.

A recently initiated program of the Division of Mental Hygiene will provide aftercare for mental hospital patients and their families. These special services are being developed in the health departments of Jefferson, Etowah and Tuscaloosa counties in cooperation with other community agencies and the State Mental Hospitals. In these counties, public health nurses will visit families of newly committed patients and give services similar to those provided for families with other illnesses. A plan for exchange of information between the hospital and the county health departments has

DEPARTMENT OF HEALTH

been developed. In this way, health supervision will be available to patients and their families throughout the patients' hospitalization and after they are discharged. Services will also include public health education activities and the coordination of activities of other community agencies which may help mental hospital patients. It is hoped that this program can be extended to other counties in the future.

From time to time the division engages in special projects, such as the recent establishment of a psychologic service at Julia Tutwiler Prison for Women. The program was initiated by agreement with the state prison system and in cooperation with the Alabama Association for Mental Health. Services will include consultation to the prison staff, classification testing, individual and group psychotherapy, and counseling and casework services for the families of inmates.

As is true of all public health programs, expansion and growth of the mental health program has been hampered by a severe shortage of professionally trained personnel. Additional clinics could be established and more services could be offered if personnel were available. The Division of Mental Hygiene has been fortunate in that it has been able to establish a program to make some additional personnel available in the future. This is a scholarship program for psychiatric social workers and clinical psychologists. Scholarship recipients agree to return to work in Alabama's mental health program for a specified period after graduation. Five students in each discipline are currently in training. Thus, Alabama is assured of at least ten new mental health workers during the next two years. Addition of such personnel should be of great benefit in further development of the mental health program.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

January 1959

Examinations for diphtheria bacilli and Vincent's	91
Agglutination tests	491
Typhoid cultures (blood, feces and urine)	425
Brucella cultures	0
Examinations for malaria	18
Examinations for intestinal parasites	3,835
Darkfield examinations	4
Serologic tests for syphilis (blood and spinal fluid)	24,593
Examinations for gonococci	1,714
Examinations for tubercle bacilli	3,534
Examinations for Negri bodies (smears and animal inoculations)	162
Water examinations	1,871
Milk and dairy products examinations	4,258
Miscellaneous examinations	759
Total	41,755

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS
1959

	Dec.	Jan.	E. E.* Jan.
Typhoid and paratyphoid	8	2	3
Undulant fever	0	0	0
Meningitis	11	8	12
Scarlet fever	90	114	79
Whooping cough	5	9	47
Diphtheria	15	6	17
Tetanus	3	3	2
Tuberculosis	150	142	175
Tularemia	0	2	1
Amebic dysentery	2	1	1
Malaria	0	0	1
Influenza	60	125	1393
Smallpox	0	0	0
Measles	78	297	213
Poliomyelitis	6	1	5
Encephalitis	2	2	1
Chickenpox	40	155	275
Typhus fever	1	0	1
Mumps	20	63	141
Cancer	336	363	416
Pellagra	0	1	0
Pneumonia	207	282	262
Syphilis	89	124	194
Chancroid	7	3	6
Gonorrhea	206	352	323
Rabies—Human cases	0	0	0
Positive animal heads	10	27	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

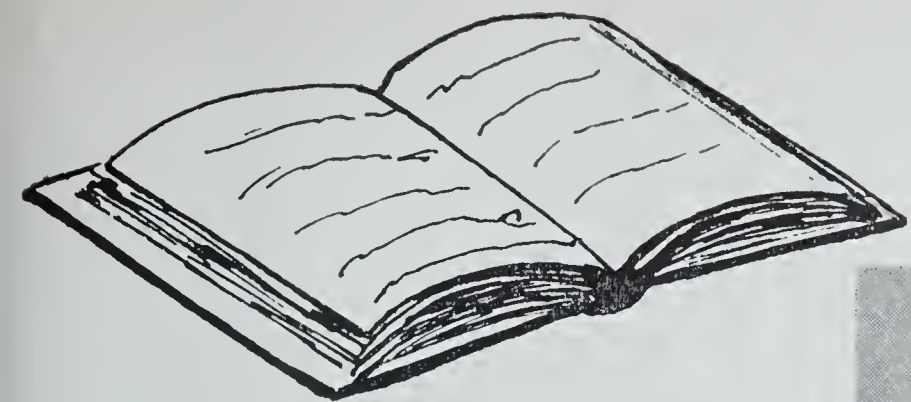
BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS AND COMPARATIVE DATA, NOVEMBER 1958

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Causes of Death	Number Registered During November 1958			Rates* (Annual Basis)		
	Total	White	Non- White	1958	1957	1956
Live births	6786	4310	2476	25.9	26.8	25.5
Deaths	2362	1506	856	9.0	9.8	9.0
Fetal deaths	130	67	63	18.8	22.2	21.3
Infant deaths—						
under one month	135	62	73	19.9	21.4	20.7
under one year	212	94	118	31.2	32.2	35.4
Causes of Death						
Tuberculosis, 001-019	27	14	13	10.3	6.9	8.5
Syphilis, 020-029	4	1	3	1.5	3.5	2.3
Dysentery, 045-048					0.8	
Diphtheria, 055	1	1		0.4	0.4	0.8
Whooping cough, 056	2	2		0.8		0.8
Meningococcal infections, 057	2	2		0.8		0.8
Poliomyelitis, 080, 081	1	1		0.4	0.4	
Measles, 085						
Malignant neoplasms, 140-205	301	216	85	114.7	109.7	106.6
Diabetes mellitus, 260	35	22	13	13.3	11.9	12.0
Pellagra, 281	2	2		0.8	0.8	1.2
Vascular lesions of central nervous system, 330-334	341	204	137	130.0	139.4	121.6
Rheumatic fever, 400-402	1	1		0.4	0.8	1.2
Diseases of the heart, 410-443	756	501	255	288.1	315.4	281.5
Hypertension with heart disease, 440-443	132	56	76	50.3	57.8	51.4
Diseases of the arteries, 450-456	60	45	15	22.9	17.7	15.8
Influenza, 480-483	8	5	3	3.0	26.6	1.9
Pneumonia, all forms, 490-493	67	42	25	25.5	39.7	29.7
Bronchitis, 500-502	6	4	2	2.3	2.3	1.2
Appendicitis, 550-553	3	2	1	1.1	1.2	0.4
Intestinal obstruction and hernia, 560, 561, 570	9	7	2	3.4	1.9	5.0
Gastro-enteritis and colitis, under 2, 571.0, 764	8	1	7	3.0	2.3	7.3
Cirrhosis of liver, 581	11	4	7	4.2	4.6	4.2
Diseases of pregnancy and childbirth, 640-689	4	1	3	5.8	7.0	10.4
Congenital malformations, 750-759	25	18	7	3.7	4.6	4.4
Immaturity at birth, 774-776	34	11	23	5.0	5.6	6.3
Accidents, total, 800-962	195	135	60	74.3	63.5	83.8
Motor vehicle accidents, 810-835, 960	114	88	26	43.4	26.6	43.6
All other defined causes	368	224	144	140.2	147.5	146.7
Ill-defined and unknown causes, 780-793, 795	91	40	51	34.7	49.7	37.4

Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.



BOOK REVIEWS

Water and Electrolyte Metabolism in Relation to Age and Sex. A Ciba Foundation Colloquia on Ageing. Vol. 4. Edited by G. E. W. Wolstenholme, O. B. E., M. A., M. B., B. Ch.; and Cecilia M. O'Connor, B. Sc. Cloth. Price, \$8.50. Pp. 327. Little, Brown and Co., Boston, 1958.

The Ciba Foundation, London, is an educational and scientific charity founded in 1947. The financial support is provided by the world-wide chemical and pharmaceutical firm which has its headquarters in Basle, Switzerland. The Ciba Foundation is an international center where scientists are encouraged to meet informally to exchange facts and ideas, mainly at the international symposia, each lasting two to four days and of which there are five or six each year. The proceedings of these conferences are issued with a minimum of editing in order to pass on to a wider audience the information and lively speculations in the chosen field of outstanding workers from many countries.

The present volume contains the proceedings of the fourth colloquia on aging. Twenty-seven authorities from many different countries participated.

The subjects discussed covered a wide variety of problems ranging from genetic control of electrolyte metabolism in the erythrocytes, glandular secretion of electrolytes, body water compartments throughout the lifespan, the effect of hormones of the pituitary and adrenal glands on the elimination of sodium, potassium and a water load in infant rats during the weaning period, the role of the kidney in electrolyte and water regulation in the aged, renal function in respiratory failure, a case of magnesium deficiency to water and electrolyte metabolism in congestive failure.

The informal discussions following each presentation are extremely interesting and informative. This book would be of value to anyone with an interest in water and electrolytes. There are articles that would appeal to the clinician as well as the research chemist.

The Ciba Foundation should be commended for its sponsorship of these valuable colloquia.

Luther L. Hill, M. D.

What Do We Know About Heart Attacks? By John W. Gofman, M. D., Professor of Medical Physics, University of California, Berkeley. Cloth. Price, \$3.50. Pp. 180. G. P. Putnam's Sons, 210 Madison Avenue, New York, 1958.

This book is written by a member of the Donner Laboratory Group in California which did the original work implicating the role of lipoprotein pattern changes in development of coronary artery disease. The book is well-written, very readable and presented with great dogmatism.

Dr. Gofman believes four things very strongly: (1) that an elevation of the SfO-20 lipoproteins is a result of increased amounts of animal fat in the diet and that this elevation is directly related to the early development of coronary artery disease; (2) that elevation of Sf 20-400 lipoproteins results from some form of excess carbohydrate in the diet and that this lipoprotein group

is also directly related to the early development of coronary artery disease; (3) that cigarette smoking predisposes to coronary artery disease in some yet unknown fashion; and (4) that hypertension is associated with a high incidence of coronary artery disease. The author admits that the latter two points are largely statistical in origin.

Since all the data referred to in this book have been previously published in appropriate medical journals and have been a matter of debate in the councils of the American Heart Association, it is difficult to see why this book was written. It is worded and is of a style as if it had been written for laymen. Yet I think it would be quite unfair to present this book to a layman worried about heart disease. I feel physicians who strongly believe in the theories presented here would enjoy reading the book but would not recommend it to their patients.

E. Fred Campbell, M. D.

Urology in General Practice. By Frank Coleman Hamm, M. D., M. S., F. A. C. S., Professor of Urology, Department of Surgery, State University of New York Downstate Medical Center; Director, University Division of Urology, Kings County Hospital; Chief Attending Urologist, The Brooklyn Hospital; and Sidney R. Weinberg, M. D., F. A. C. S., Assistant Professor of Urology, State University of New York Downstate Medical Center; Attending Urologist, University Division of Urology, Kings County Hospital; Assistant Attending Urologist, Long Island College and Maimonides Hospitals. Illustrated by Elizabeth Cuzzort. Paper. Price, \$6.00. Pp. 293. J. B. Lippincott Company, Philadelphia, 1958.

This is a well written concise text outlining the fundamentals of urology. The illustrations are excellent, using photographs of anatomic specimens and x-rays. This book should be of interest to all who practice medicine.

Thomas H. Williams, M. D., F. A. C. S.

The Doctor Business. By Richard Carter. Cloth. Price, \$4.00. Pp. 283. Doubleday and Company, Inc., 575 Madison Avenue, New York 22, 1958.

This reviewer believes the December 4, 1958 issue of the New England Journal of Medicine dealt fairly with this book and, therefore, takes the liberty of reproducing its comments here.

A recent publication of Doubleday and Company, under the title *The Doctor Business*, presents the results of a seven-year investigation into the methods by which the public receives and often fails to relish its medical care. The author is Richard Carter, a reporter and medical writer and a former recipient of the George Polk award for journalism; in this latest work he probes the tender areas in the traditional practice of medicine and indicates the need, not entirely unrecognized, for an enlightened attitude on the part of the medical profession toward its public. A counter-current might also have been indicated, for the public

needs intelligent education in the available services that medicine has to offer, even more than it needs an all-out condemnation of medicine's methods.

All the human faults in the system of delivering medical care that embarrass every honest physician—and there are many, many thousand such practitioners—are tossed over and over again, like a green salad, until a quantity of the dressing covers each leaf. Unfortunately, there is more vinegar than oil in the mixture. The points made need hardly be elaborated here—the doctors know fully as well as the author the harm both to the profession and to his patients that an unscrupulous physician, especially if poorly trained, can do through overcharging, unnecessary operating, superfluous visits, fee splitting, kickbacks, ignorance and neglect. The indictments comprise about the same shabby list that can be brought against individuals in every profession, every industry and every trade, for human nature encompasses a wide range of vices and of virtues, and organizations, based on the best of intentions, change direction more slowly than one might wish, and cling fast to outworn creeds.

The doctor happens to be a conspicuous mark because he works against a backdrop of human suffering and human need. So far as costs are concerned—always a sore point when the occasion is unexpected—it must be remembered that the public spends each year on alcohol, on cosmetics, on cigarettes, on the sleek products of Detroit, on fatuous entertainment and at the race track a gross sum far greater than it spends on health. And yet when sickness comes the unanticipated cost of its care is often bitterly resented—a major argument in favor of voluntary prepayment plans.

The doctors, too, know something about the faults in their profession, and most of them would like to see these faults corrected. They realize that, whereas the cherished fee-for-service method of payment need not be abandoned (and goodness knows there is more than a chance that it may be overcherished), there are better organized methods by which payment can be planned for; they realize that group practice has advantages for both physician and patient that most solo practitioners can hardly offer.

Although Mr. Carter spares none of the hereditary eccentricities of medical practice, his lance is leveled most consistently at the American Medical Association, which he credits with far greater power over the individual physician than most doctors would tolerate. They all recognize the influence of the Association and may sometimes marvel at its lack of maneuverability, but they know that their state and district societies hold the one important disciplinary measure to which they are subject—that of dismissal from membership. That this authority may sometimes have been exercised—and withheld—unfairly cannot be doubted, but it is questionable whether an entire national organization should be condemned for the injustices that some of its individual members or component parts may have committed. It should also be known that in various states a physician may be a member of his state and district society and not of the national association.

There is no question that Mr. Carter started out with a crusader's zeal to find and declare every moss-covered error that needed to be righted in the physician's relation to his public. As the good work progressed, however, he must have worked himself into a lather of indignation, employing his extremely effective skills in a pamphleteering effort that unfortunately tends by its very extravagance to weaken the wholesome effect of his ardor. He doth protest too much; he comes both to appraise Caesar and to bury him.

One sadly concludes that Mr. Carter has little use for doctors either individually or conglomerately, except under the strict guidance of their patients, and in drawing up a bill against them he becomes the attorney for the prosecution, admitting as little evidence as possible that does not support his case. The committees and councils of the American Medical Association, for instance, working quietly for better education, for the standardization of hospitals, for the improvement of rural care and for the control of illicit practice, receive scant attention. The doctor-patient relation itself is given little serious consideration, perhaps because of its traditionalism, and this is a pity, for it is a tangible factor in the art of medicine that represents one of the highest human qualities—that of compassion.

No matter how a physician may be chosen, that attribute in him that inspires confidence and often affection is among his most valued assets. One may scorn faintly Sir Luke Fildes's painting of the physician at the bedside, and it has been reproduced as political material practically to the point of emesis, but no one who has watched a fellow being's passage through the shadowed valley with a devoted medical attendant to ease the lonely journey will make light of this relation.

Medical practice is undergoing a metamorphosis, almost overwhelmed by the scientific advances that it has had to absorb, hard pressed by its economic problems, encumbered by its heavy weight of traditionalism, hampered by the very humanness of its followers.

We in the doctor business should be grateful to Mr. Carter for his graphic exposition of these problems, even as all must regret the extravagance with which he seems to blacken the whole profession with the same tarry brush. In this he has done a disservice to much that is good in his condemnation of that which is not good or which is questionable.

The kind allusions that he has made to this *Journal* are acknowledged, even as some of his less flattering remarks about the profession as a whole are deplored. For whereas many of his accusations are made on a basis of fact, they apply only to a minority of the still noble and humane profession about which he writes.

E. Fred Campbell, M. D.

Tuberculosis as Cause of Death—Tuberculosis as a cause of death has dropped from first to 13th place in the past half century, but one new case is reported every five minutes in the United States.

This fact is revealed in the current issue of *Patterns of Disease*, prepared by Parke, Davis and Company for the medical profession.

In the past 20 years alone the number of tuberculosis deaths has dropped about 80 per cent. The number of newly reported cases, however, has declined only about 20 per cent during this period.

This publication stresses the need for more intensive drives to detect the disease. For every known case, it reports, there is one unknown tuberculous person. Total number of known and unknown cases (both active and inactive TB) in the U. S. is estimated at 800,000.

"To eradicate tuberculosis," *Patterns* points out, "the disease must be detected and treated early, while lesions are small and readily amenable to therapy." Yet, for the past five years, only about 22 per cent of newly reported active and probably active cases have been in the early stage. In 1956, about 20 per cent of persons who died of tuberculosis had not been previously reported as having the disease.

AMERICAN MEDICAL ASSOCIATION NEWS

PERSONS NEED TO UNDERSTAND VALUES OF AUTOPSY

Autopsy, "the operation no one talks about," should be talked about—long before there is any need for it.

Every family should discuss the question of autopsy and decide how it feels about the operation, thus simplifying the decision when a family member dies.

This recommendation was made in an article in the February *Today's Health*, published by the American Medical Association.

Autopsy can, the article said, "bring peace of mind to the patient's family and the gift of life itself to future generations."

Yet many persons object to postmortem examinations. Their objections are often based on misconceptions, the article said.

One is that the body will be disfigured. However, nothing in the process alters the countenance of the deceased. Unless the case is very unusual, only a single midline incision is made in the torso, and the vital organs removed for further study. The brain is examined by an opening across the scalp, afterward hidden by the hair. The doctor uses the same skill in performing an autopsy that he uses in the operating room.

There is no fee for performing an autopsy. It can be performed in less than two hours, and will not, as many persons think, delay the funeral.

There is little fact to substantiate the statement that autopsy is against a person's religion. The article quoted Protestant and Roman Catholic leaders as saying there is no objection to autopsy in their churches. While Orthodox Judaism forbids autopsy, Reform Judaism does not.

Another objection is "The patient has suffered too much already." This attitude, the article said, expresses the feeling that the patient still exists and is capable of feeling pain.

Three reasons why postmortem examinations are important were cited. They are:

—Some diagnoses cannot be made by observation. Tumors of the brain, for example, may spread to the lung, but the location of the primary lesion can't be demonstrated without autopsy.

—For research purposes. Correct diagnosis still remains the most difficult and fundamental part of a doctor's job. Whatever his field of specialization, there is perpetual interest in research, and autopsy

is one of the most valuable aids.

—To find an explanation for symptoms (often coincidental) which do not fit in with the patient's primary disease.

Through autopsy, a doctor may learn how to prevent certain diseases from recurring within a family, thus prolonging life expectancy. Autopsy may also explain why a person died and thus relieve a family member's mind. And finally it may provide information of value in the advancement of general medical knowledge.

WIENER DESCRIBES NEW RH BLOOD REACTION

An explanation for certain puzzling blood reactions in persons receiving transfusions or having babies has been suggested by one of the discoverers of the Rh factor.

Writing in the February 14 *Journal of the American Medical Association*, Dr. Alexander S. Wiener, in collaboration with Dr. Lester J. Unger, explained a new type of Rh reaction.

The Rh factor is a protein substance found in most persons' blood; however, some persons do not have the substance and are said to be Rh-negative. If they receive blood containing the factor, they build antibodies against the Rh factor. This causes a serious reaction. Reactions may also occur in babies with the factor who are born of mothers without the factor. This condition is known as erythroblastosis fetalis.

Rh reactions have been thought to occur only between Rh-negative and Rh-positive blood in Rh-negative persons.

Now, however, it has been found that blood reactions can occasionally occur in Rh-positive persons. Rh-positive persons have been found to have antibodies against the factor that strongly resemble those found in Rh-negative persons. This "seeming paradox" is explained by the fact that there are at least four Rh factors in normal blood. If a person is missing one of the factors, he may react to blood containing the missing factor by developing antibodies against it.

This knowledge may help solve some of the puzzling problems of erythroblastosis fetalis and transfusion reactions, the doctors said.

They pointed out that the possibilities of such reactions are quite small, since only about 1.6 per cent of Rh-positive Negroes and only about 0.1 per cent of Rh-positive Caucasians would be missing any of the factors.

Dr. Wiener is senior bacteriologist in the office of the Chief Medical Examiner of New York, and Dr. Unger is director of the blood bank at New York University Bellevue Medical Center.

TRACHEOSTOMY SUGGESTED FOR "POOR RISK" PATIENTS

A technique used to help paralyzed polio patients breathe has been suggested as a way of helping aged and critically ill patients survive major operations.

The most common postoperative complications are related to the respiratory system. For feeble or critically ill persons these complications can be very serious. In fact, the danger of these complications sometimes prevents such patients from undergoing major surgical procedures.

However, the technique of tracheostomy (or tracheotomy), in which an artificial airway is made by inserting a tube in the windpipe through the throat, helps the patient breathe, and in turn prevents serious complications.

Three Miami physicians, writing in the February 14 Journal of the American Medical Association, said tracheostomy has been used in the postoperative care of patients with certain thoracic and neurological conditions as well as with polio patients, but it has not received widespread acceptance as an adjunct to treatment for the critically ill general surgical patient.

They noted that "poor risk" patients frequently have preexisting pulmonary disease plus loss of strength necessary for powerful coughing and breathing. These, along with the additional factors of anesthesia and postoperative pain, make it difficult for patients to survive respiratory complications.

Use of tracheostomy helps overcome these difficulties. It is best performed immediately after completion of the major surgery or within the first few postoperative hours.

Within a recent three-month period, the Miami doctors performed tracheostomies on 11 patients. It was thought that extensive surgery would have been uniformly fatal without the postoperative use of tracheostomy, the doctors said. Eight of the patients completely recovered. The other three died of late complications of the primary disease and in only one case did a pulmonary complication materially contribute to death.

The authors are Drs. Thomas E. Starzl, William H. Meyer, and John J. Farrell of the department of surgery, University of Miami School of Medicine and Jackson Memorial Hospital.

OCDM DIRECTOR OPTIMISTIC ABOUT CIVIL DEFENSE INTEREST

The American people are not as apathetic about the dangers of thermonuclear attack as is commonly supposed, according to the director of the Office of Civil and Defense Mobilization.

In an interview in the January Today's Health, published by the American Medical Association, Leo A. Hoegh said people are concerned although they could perhaps be still more concerned. For instance, on a recent television program, he flashed a card which gave the five points that every citizen should know if an attack comes.

"To my amazement," he said, "we've had to print over 30 million of those cards and distribute them to the American people. The demand has been that great."

People are learning what to do in case of thermonuclear attack, as well as in natural disaster. One means of learning is a "Handbook for Emergencies," published by the OCDM and distributed so far to 40 million homes through the Boy Scouts.

The book is already saving lives, Hoegh said. The OCDM has recently received letters from three persons saying that things they learned from the book saved their lives.

The book may be obtained from local civil defense offices or from the Washington, D. C., headquarters of the OCDM.

Hoegh noted that thermonuclear war is a threat, but people can meet it if they are properly informed. He contradicted a recent statement by a national research organization which said there would be 160 million casualties if an attack came.

This figure is based on three false assumptions, he said, including the ideas that every citizen will be outside and will stay outside for two weeks, that there is no civil defense planning, and that the enemy will hit every target.

Rarely are there more than 25 per cent of the people outdoors at one time. A number of cities have excellent civil defense plans that would immediately go into effect on attack, and it is quite unlikely that the enemy would hit all of their targets.

The five things a person must know to be prepared for an attack are:

- Warning signals and what they mean.
- The community plan for emergency action.
- Protection from radioactive fallout.
- First aid and home emergency preparedness.
- Use of Conelrad—640 or 1240 on the radio dial for official directions.

Every home should be equipped with a two-week supply of food and water, a first aid kit, and a battery radio.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

April 1959

No. 10

A PROGRESS REPORT ON RESEARCH IN THE PRESERVATION OF BLOOD AND BLOOD DERIVATIVES

ROSS T. McINTIRE, M. D.

Chicago

The history of the use of blood for life saving, as well as for therapeutic uses, goes back but a very few years. The history of blood itself goes back through the centuries and was given serious consideration for use in life saving by the Egyptians as early as 2500 B. C.

It was not until Landsteiner discovered the groups and types of blood, in 1900, that any practical use was made of blood for transfusion purposes. The great difficulty in transfusing blood was due to the rapid clotting time, which thereby prevented the injection of blood from one donor to another.

Mechanical devices were used to effect transfusion and one of the successful methods was devised by Crile in 1907. A cannula coated with wax was employed by him in direct transfusion from donor to recipient. In his hands it was quite successful, but proved to be a disappointment when used by the average practitioner.

Much study was given to finding a method of preserving red cells so that transfusions could be given without danger of clotting. Sodium citrate answered that purpose and was used for many years as a blood preservative. The only difficulty was the short period that red blood cells could be preserved without hemolysis taking place. As the red cell is the most accessible of all human body cells, much study was made into the properties, as well as determining the chemical constituents of the plasma.

World War II made great demands upon the use of blood, for the casualties ran into the hundreds of thousands. Unfortunately, no blood preservative had been found that would permit the ship-

ping of whole blood to the various combat areas, which included practically every country in the world.

It was at this time that we turned to the use of blood derivatives. As Surgeon General of the United States Navy, it was my responsibility, together with the Surgeon General of the United States Army, to develop a realistic program that would supply blood and plasma in great quantities. The American National Red Cross assumed the responsibility of collecting the blood. Through voluntary contribution, 14,000,000 pints of whole blood were collected. Some five million 500 cc. packages of dried plasma were provided for use; and 750,000 100 cc. vials of serum albumin were provided for the treatment of shock. It was not until 1943, when the ACD solution was standardized, that whole-blood shipments over the world were possible.

Twelve years have passed and no preservative has been found that will preserve blood for useful transfusion beyond twenty-one to twenty-eight days. It is estimated that the life of a red blood cell in the body is 120 days. Research says we should find an artificial means of preserving red blood cells for at least ninety days. With the tremendous increases of blood that a third world war would demand, all efforts should be made to bring this about.

The surgeon of today expects to have sufficient blood for the safety of his patient. Chest and cardiac surgery makes severe demands on blood donors of a community. The need can be solved in part by careful supervision of the amount of blood needed for a given case. Too often, unnecessary blood is given because it is available. Then, too, excess transfusions can damage the kidney and liver and other vascular structures.

Read before the Alabama Surgical Section, United States Section, International College of Surgeons, Mobile, October 3, 1958.

I cannot emphasize too strongly the need for every surgeon to feel the responsibility of his patient when the subject of transfusion comes up in connection with his patient's needs. The reason for this should be obvious for, though the anesthesiologist, as we know him today, is highly qualified in proper selection of an anesthetic, and because we have become accustomed to the giving of transfusions along with the anesthetic, whether it be of the intravenous type or inhalation, we have passed along the responsibility of the actual mechanics of giving the blood. This does not, however, relieve the surgeon of responsibility in determining the amount of blood that should be given, preoperatively or postoperatively. There may come a time during a surgical procedure when a patient is not doing well, and where there has been a great loss of blood, then perhaps the surgeon will share the responsibility of quick decision for additional amounts of blood with the anesthesiologist. The surgeon is supposed to know the physical condition of his patients. He must have knowledge of the blood levels, preoperatively, and surely every qualified surgeon realizes the blood needs in the anemias and other dyscrasias.

One of the real dangers of excess transfusion is the high incidence of virus infections. Since World War II we have found, throughout the land, an ever-increasing rise in the morbidity of homologous serum hepatitis. As we all learned, this liver disease became very prominent following the use of dried plasma which had been prepared from massive pools of blood. Now we have reached the point where we find homologous serum hepatitis occurring in a great many people following a single transfusion of blood.

It is well-known, too, that the virus of homologous serum hepatitis is a very persistent one and lives in certain media over a great length of time. We have found, too, that the virus can be isolated and then diluted one million times and then injected into a human being and homologous serum hepatitis will be produced, and in this experimental fashion has created one death. This experiment was carried out at a state penitentiary on voluntary subjects who were life prisoners, who understood the dangers. So it is a very serious responsibility that any surgeon assumes when he orders a blood transfusion. This is only one of the many dangers of excess transfusions. Where we know that we have disease present, or where there is cardiovascular trauma, we should be increasingly careful in what we do.

One variation in transfusions is often practiced where a patient is found to be sensitive to plasma. This is not uncommon, and so we resort to washed red cells. In this way we reduce the dangers of anaphylactic reactions and at the same time free

the plasma for fractionation. There are certain hospitals in this country today that make it a practice to transfuse patients with red cells alone—and in that way make available derivatives that can be used from the plasma.

In the treatment of shock, whole blood is, of course, outstanding in what it can do, but the same results can be secured by the use of serum albumin, which is an extremely stable preparation, and is so prepared that the transmission of virus disease is impossible. Dried plasma is frowned on since there is no way to sterilize it completely. For a long time it was felt that plasma could be sterilized for safe use by ultraviolet rays. This is not so; for it has not been possible to get plasma completely free of cellular structure and in that way the viruses, especially of homologous serum hepatitis, have often escaped the radiation.

There is another method, however, that is much safer, while there is still the same danger as in blood transfusions, and that is using plasma from one pint of blood; in other words, the plasma can be stored in liquid or frozen form. It is very useful in the treatment of shock.

Continuing the investigation into the use of blood derivatives, gamma globulin, which contains the antibodies, proved to be of great value in the control of such a disease as measles. It was found to be the only agent that had immunizing qualities for homologous serum hepatitis, as well as in its treatment.

Fibrinogen, which has so much to do in the control of hemorrhage, continues to be useful in obstetrical practice: more than 700 cases of obstetrical bleeding have been treated by the use of this agent. One of the dangers in the use of fibrinogen has been the transmission of hepatitis, and, for this reason, its use has been very slow in acceptance by the specialist, in obstetrics and gynecology.

One additional use for gamma globulin is in the treatment of hypogammaglobulinemia. One most interesting development is the use of gamma globulin in herpes zoster. Since this is posterior poliomyelitis, it would seem reasonable that this blood derivative would have a useful effect in controlling this most painful disease. It is well-known that gamma globulin is effective in anterior poliomyelitis if the titer is of a high level. Other studies are going forward in respiratory infections complicated by asthma.

At a recent symposium on antibiotics, which was held in Washington, D. C., it was reported that scientists have added a knockout punch to an already hard-hitting wonder drug—chloromycetin.

The added wallop, which might well be incorporated with a variety of disease-fighting drugs,

is the blood-made material, gamma globulin. This contains the specific disease fighting antibiotics the blood produces after exposure to disease invasion.

The clinical trials on the drug-fortified gamma globulin followed laboratory reports that the combination increased chloromycetin's curative action as much as 50 times—in purposely infected test mice. In one of the clinical trials, Dr. Evelynne G. Knouf reported that 10 patients subject to frequent infections and who failed to respond to other antibiotics, the so-called wonder drugs, were successfully treated with chloromycetin plus gamma globulin. It was reported that they recovered so promptly that only about one-third of the amount of antibiotics previously used in similar infections was necessary. Dr. Burton A. Waisbren reported that gamma globulin and chloromycetin worked in 46 patients who had failed to respond to other therapy.

Other derivatives that will play a great part in the treatment of disease, as well as in the development of immunity, are properdin and plasminogen.

Pillemer, in 1954, described a hitherto unknown component of plasma which appears to play a dominant role in "natural"—that is nonspecific, immunity. He devised a scheme for isolation of this component which required the use of human serum. Pillemer's technique has now been successfully adapted for preparation of properdin from plasma of any type. This opens the way to the large-scale preparation which will be necessary to establish the role of this interesting component in radiation sickness, surgical shock, and other clinical conditions where the properdin titer is known to be low.

Plasminogen for topical use has been made ready for commercial distribution by at least two pharmaceutical firms. Extensive and successful clinical trial in the treatment of chronic granulating antibiotic-resistant ulcers seen in diabetes has been reported by Dr. Eugene Clifton of Sloan-Kettering Institute. Dr. Clifton has also reported limited successful use of plasminogen systemically in the treatment of central arterial thrombosis and of venous thrombi. Plasminogen must be converted to plasmin before use. At the present this is accomplished by the bacterial enzyme streptokinase. Active work on the preparation of urokinase from human sources is being pursued in several laboratories.

The plasminogen being used has been heated for 10 hours at 60 degrees C. for destruction of the hepatitis virus. This is accomplished without major alteration of the plasminogen.

Following the end of World War II, there has been a recognized need for a method of storing

whole blood. This can be divided into two problems: storage for peace-time needs and a stockpiling for emergencies in both military and civilian disasters. It is well recognized that blood is a perishable commodity and, since it cannot be reproduced, methods must be found whereby it can be preserved over long periods of time.

Investigators in both the United States and Great Britain have been working diligently in this matter and it is good to report that real progress is being made. The various preservative solutions, such as the acid citrate dextrose solution, is adequate for peace-time need—although red cells, after being stored for 21 days, are of little value in transfusion. Much progress has been made in improving the equipment, both for collecting and transfusing blood. The use of silicone-coated receptacles has done much to cut down the amount of hemolysis. Strumia has made a big contribution in preserving red cells by his method of slowly cooling the blood to 5 to 1 degrees C., using a period of one-half to one hour after collection. Gibson has done a great deal in working out a method of preservation, using a citrate phosphate dextrose solution. This has considerable advantage over the old ACD mixture in that it prevents marked swelling of the red cells, as well as preventing loss of intracellular potassium. Then, too, this method has shown that 80% of the red cells stored have real value up to 28 days.

This information is of value, for it shows that the loss of intracellular potassium and a depletion of organic phosphates are associated with the loss of viability and has been one of the real reasons why stored blood has been so ineffective after a short period.

We turn, then, to a method that gives great promise of long-term storage. In considering this, we mean periods of years—not months. The rapid freezing of whole blood, or separated red cells, at a temperature below —40 degrees C., offers one solution to the problem—but even here we find that external and internal ice crystals cause considerable difficulty and rapid destruction takes place. Therefore, in order to lower the temperatures of blood cells to below —40 degrees C., special processes are necessary.

Meryman was one of the first to report progress in this regard—his first report being in December of 1955. By reducing the temperature very rapidly, the cells were carried through the critical temperature zone mentioned before appreciable crystal formation and derangement of osmotic balance between the cells and the surrounding medium could occur. Meryman solved this problem of freezing whole blood by spraying it onto the surface of liquid nitrogen at a temperature of —195.8 degrees C. The tiny droplets were frozen instantly

and with minimum damage to the red cells. Upon freezing, the droplets fall through the nitrogen-like grains of sand and are collected in a container at the bottom. The frozen blood is then stored at the temperature of liquid nitrogen. Meryman describes this condition as "biologic eternity."

If this method proves satisfactory, the situation would be solved. To thaw the blood, the granules are scattered into warm plasma or saline, and, if thawing of each granule occurs very rapidly, there is minimum hemolysis. Here is the great difficulty: to thaw blood that has been stored in test tubes is one matter, but the problem of handling 500 cc. units of blood is an entirely different affair. Thawing must occur with as great a speed throughout each granule as is necessary in the freezing process, for here is where large crystal formations can occur during thawing, as well as during freezing. The damage from crystal formation is the rupture of the membranes of the red blood cell, causing immediate hemolysis.

Two human transfusions have been made following the techniques listed above, but only small quantities of blood were used. This method is very attractive and if it can be made practical, there would be very little difficulty in storing great quantities of blood that could be used at any time. Intensive investigation is going forward in this present study, with Meryman and his group leading the way.

A second approach to low-temperature preservation is to introduce into the medium a neutral solute which readily penetrates the red cells, prevents osmotic lysis as the electrolyte content of the medium rises during freezing, and which prevents large crystal formation within the cells. One important factor was found in this method—that time must be allowed for this material to enter the cells and reach equilibrium with the medium before freezing was attempted. This, then, can be done relatively slowly. The solution used up to date is glycerol. It has been used extensively for the preservation of separated red cells.

Smith, in 1950, did a study on the quick freezing of sperm, as well as working out a method of quick thawing, showing that the viability of the sperm was undamaged.

In 1956 a number of investigators worked on methods using glycerol in freezing and in thawing. Different compositions of dialyzing fluids were prepared and various workers used concentrations of 40, 45 and 50% glycerol. After the proper equilibration time with glycerol was determined, the red cells were then frozen to temperatures between -20 degrees and -120 degrees C. and stored at these temperatures. Red cells stored at levels between -40 and -80 degrees C. have been kept satisfactorily for about two years. When

removed from storage, the red cells are thawed by emergence in a container in a water bath at 37 degrees C. and the glycerol is removed by dialysis with decreasing concentrations of glycerol. The cells are then washed with saline and resuspended in a suitable medium. The whole procedure of collection and separation of red cells and plasma may be carried out in a completely closed system by using the Cohn fractionator. The main problem, however, revolves around the introduction of glycerol in the cells and its subsequent removal. If the glycerol concentration is increased or decreased too rapidly, hemolysis immediately occurs. Consequently, much work has been necessary to determine the time necessary for the concentration of the glycerol prior to freezing.

It has been found that this method requires about one hour to glycerolize the red cells and about two hours to deglycerolize them after thawing. It is necessary to find a suitable suspension solution for the deglycerolized red cells. It is interesting to note that these cells that have been stored for two years have the same viability as a fresh red blood cell. A solution that is very satisfactory is composed of 5 gm. per cent albumin, 400 mg. per cent dextrose, 20 millimolar potassium phosphate and sodium chloride to produce 0.15 ionic strength. Fifty cc. of this solution are used for each unit of red cells separated from 500 cc. of whole blood.

The men in research will provide the means necessary to give doctors in the small towns the ample supply of blood that will be needed should mass enemy attack come today. Our blood banks are in our large centers, in the main, and the small banks in hospitals in our medium-size towns will not be adequate to supply blood in any quantity. Consequently, the answer is in the ability to preserve blood over the years. At the present time, civilian defense should make certain that doctors, nurses and technicians in our small communities understand the techniques in the actual transfusion of blood. It will be necessary, also, for men in small laboratories to know the methods necessary to prepare the frozen blood for transfusion. As has been brought out in this paper, this is as difficult as the freezing of the blood itself.

It is regrettable that civilian defense has been treated so lightly in every part of our land. It is high time that this problem be approached from a common sense standpoint, for preservation of life will be difficult. The evacuation of cities is completely impractical, and a complete review of our present plans should go forward rapidly. This is being done in a few centers, but, for the nation as a whole, it is not being done. We can never emphasize enough the need for the training of our men and women and young adults in the art of sur-

vival and first aid.

During the past year, plasmin has been tested, clinically, in two different areas. Moser, of Washington, D. C., reports 52 patients treated with plasmin for various forms of thromboembolic disease, in the American Medical Association Journal of August 2, 1958. These cases are reported in detail.

It is interesting to note they cover a wide range: 18 cases of deep venous thrombophlebitis, 3 with pulmonary embolism, 1 coronary thrombosis, 1 peripheral arterial occlusion, and several cases of superficial thrombophlebitis.

Method of treatment was by intravenous infusion of plasmin dissolved immediately prior to use in 500 to 1000 cc. of 5% dextrose solution in water. The intravenous infusion was carried out over a 2 to 4 hour period. Toxic reactions have been infrequent and minor. The results have been most encouraging and will undoubtedly call for further use of this derivative of human plasma—for its action in dissolving clots, regardless of the location, seems to have a much greater effect than any other previously known method.

Clifton, in his study, has shown that plasmin is highly successful in dissolving an intravascular clot as long as three days after its formation. In the case of coronary thrombosis, a most successful effect was obtained—though the attack was severe,

the patient returned to a normal state within nine days, with all electrocardiographic readings normal.

Sussman and Fitch report at length on three cases with hemiplegia. These cases were treated by the same method of slow intravenous infusion of plasmin. The site of the obstruction in the cerebral arteries was determined by arteriography. Restitution of the middle cerebral artery circulation was observed in one patient. In the second, partial clearing of an occluded carotid lumen was observed, but in the third, which was an anterior cerebral artery occlusion, no change occurred. These studies are very encouraging and further study should be carried on.

A very promising future for this form of therapy is anticipated for a number of reasons: that there are few side effects; that the effect on coagulation is not disturbed to any great extent; and that we have an agent which is a derivative of human plasma and gives promise of dissolving clots that have been established over a period of time. Studies are now being made with plasmin, using heparin concurrently. These preliminary tests hold out great promise in the treatment of thromboembolic disease in a manner that we have not known. We must look forward to future reports to determine the soundness of our theories.

AN UNUSUAL ABDOMINAL TUMOR

PAUL PETCHER, M. D.

Lassa Hospital

Post Office Mubi

Nigeria, British West Africa

A 12-year-old colored male was admitted to the Lassa Hospital of the Church of the Brethren Mission in Nigeria on March 24, 1958. He gave a history of being ill for about one and one-half years. His illness started with pain in his left flank, dysuria, frequency, and hematuria. At this time he said that he noted some swelling in his left flank. The swelling later left his flank and moved around into his abdomen.

On admission, he complained of frequency and dysuria, with terminal hematuria. Examination showed a 12-year-old boy, moderately well nourished, with enlargement of his abdomen. Examination was negative, except for an abdominal tumor which filled the lower abdomen and paraumbilical region, extending more to the left side. It was about 20 cm. in diameter, was nontender,

and was felt to be freely movable and cystic in nature.

Laboratory findings were as follows: hemoglobin 75%, stool examination negative for ova, parasites, or cysts; urine examination showed RBC one plus, albumin four plus, ova of *Schistosoma haematobium* were present. Flat plate of the abdomen showed only the tumor mass with no calcified areas present.

The patient was given Stibophen to a maximum dose of 3 cc. intramuscularly for 12 injections. He was given multiple vitamins and milk to supplement his usual diet.

An exploratory laparotomy was done under drip ether anesthesia and a mass which was cystic in nature was found. It was covered by peritoneum and seemed to be arising from some retroperitoneal structure. The dissection was carried around the tumor, separating its covering of peritoneum.

Dr. Petcher is a member of the Medical Society of Mobile County.



Fig. 1. Abdominal tumor prior to surgery.



Fig. 2. Tumor during surgery, partially dissected of its peritoneal covering.



Fig. 3. The patient postoperatively.

The ureter was found to enter the tumor above and was dilated to about 1 cm. in diameter. At the point of exit, the ureter was collapsed. The ureter was sacrificed after ligating it both above and below with chromic one catgut. As dissection was carried posteriorly, the tumor was inadvertently opened and was found to be filled with white fluid which did not have an odor. Inside, the cystic mass was found to have many finger-like projections into the retroperitoneal area. Due to the nature of these, it was decided that a complete dissection of these should not be attempted as blood was not available and considerable blood would be lost in the dissection.

The cyst wall was removed, leaving only the retroperitoneal projections opening into the peritoneal cavity. The abdomen was then closed.

After surgery, the specimen was examined and the ureter was found to enter the mass from above and then to become continuous with the wall of the cyst. The opening of the ureter leading from the cyst was found to be present but very small.

Postoperatively, the patient was given penicillin 300,000 u. O. D. x 5d., in addition to one Atabrine tablet three times a day. Forty-eight hours after surgery he was still febrile, and streptomycin, 500 mg., was ordered daily for five days. His postoperative course thereafter was uneventful. He was asymptomatic and discharged on April 16, 1958.

Pathologic report was as follows: "The mucous membrane lining of the cyst has been replaced by granulation tissue within which are schistosoma. This is a schistosomal granuloma, but I can not identify the tissue from which the cyst developed." A resection of the tissue was made and some small fragments of mucosa suggestive of transitional epithelium were noted.

From the gross findings one can reconstruct the probable pathologic process. First, there was infestation with *Schistosoma haematobium* which was present in the vessels around the bladder and ureter with inflammatory reaction. Secondary granulations occurred in the ureter obstructing it and causing stoppage of flow of urine, with back pressure. Because of the area of localized weakness, the ureter became markedly dilated in one area which progressed to a large size and extended into the abdomen, where it presented itself as an abdominal tumor. The abdominal tumor was the cause of the patient seeking medical care.

Abdominal tumors in children present an interesting diagnostic problem. This case is presented for two reasons: First, this is an unusual type tumor. Second, we, as physicians need to be cognizant of the wide variety of diseases which are in remote parts of the world but near to all of us as our world becomes smaller, due to the rapid advances in transportation.

VARIOUS ASPECTS OF THORACIC SURGERY

MOSES BEHREND, M. D.

Philadelphia

From the simple operation of pneumothorax to that of lobectomy and pneumonectomy for tuberculosis of the lungs, history records many changes in technic in the past twenty-five years. The operations of pneumonolysis, plumbage, phrenicectomy, phrenemphraxis and thoracoplasty have almost gone into the discard. This is due to the reduction in the number of cases of tuberculosis, their earlier treatment, and the more radical operations of lobectomy and pneumonectomy. Time only will tell whether these radical operations are superior to those we did years ago. There seems to be no question that the early operations were effective, because many cases of tuberculosis were arrested. Even with simple pneumonolysis alone, many patients have been brought back to health. It has been difficult to follow these cases after years have gone by. Several cases of arrested tuberculosis stand out very prominently as a result of this simple operation. One patient who owns a large clinical laboratory has pursued his occupation for many years following the operation of pneumonolysis performed nineteen years ago. At one time, in a follow-up of patients in whom the operation of thoracoplasty was performed, sixty-nine per cent were arrested cases. Of ninety cases that had the operation of thoracoplasty performed in the sanatorium at Hamburg, Pennsylvania, seventy-nine per cent were discharged with a negative sputum. This is a challenge for the cases which have had a radical operation.

Time will not allow me to recite many of the outstanding cases of patients who resumed their occupations as before. However, one patient stands out very clearly. He is a physician who developed hemorrhages all of a sudden. About that time streptomycin was discovered and used in several cases of pulmonary tuberculosis. The patient was hospitalized, and large doses of streptomycin were given. It was really an experimental case, because we did not know at that time what the after-effects would be. He had a three-stage thoracoplasty, which helped put him back in his profession, which he has been practicing again for the past ten years. Very little data can be given to you from personal experience on lobectomy or pneumonectomy, because this was a later development. The most successful cases of pneumonectomy for tuberculosis were those in whom there was an obstruction to the bronchus. Again one case in particular stands out prominently which was operated on

seventeen years ago. In 1941 a pneumonectomy was performed on a registered nurse, a graduate of Philadelphia General Hospital, with the result that a perfect arrest of her disease has occurred. She assumed all the duties of a housewife shortly after this operation, and has continued to do so.

Carcinoma of the Lung. It is not the province of this paper to go into the relationship of excess smoking to carcinoma of the lung. In 1958 four hundred and twenty-two billion cigarettes were consumed. Investigators here and in Great Britain are still at loggerheads concerning the cause and effect of this dread disease. If one listens and reads the reports of the physicians employed by the manufacturers of cigarettes, cigarette smoking has no important effect upon the incidence of carcinoma of the lung. On the other hand, those physicians and laymen who are conducting an independent survey, supposedly on scientific grounds, believe that excess smoking is a cause of carcinoma of the lung. The American Cancer Society has also conducted its own investigation, and believes that smoking is an important factor in the incidence of carcinoma of the lung.

Be that as it may, the all important thing is to attack carcinoma of the lung surgically in its early stages. This dictum has been preached for many years wherever carcinoma occurs. There is no question that this propaganda has brought cases of carcinoma of the lung to the surgeon earlier. The symptoms of early carcinoma of the lung are not always discernible. Many are picked up as a result of routine x-ray survey. Sometimes there is no cough present, no spitting of blood, nor pain in the chest, but eventually, if the disease continues, all these symptoms appear. The paramount question arises as to the surgical procedure. Is it sufficient to do a lobectomy, or a total pneumonectomy? There are many surgeons who believe that lobectomy is preferable to total pneumonectomy where the lesion is localized in a lobe of the lung. Julian Johnson and his group feel that lobectomy has given them wonderful results. The five-year survival rate following radical pneumonectomy is no higher than they have obtained in the standard type of segmental resection. They also find that blood vessel invasion is of greater prognostic significance than lymph node invasion.

My first pneumonectomy for cancer of the lung was performed in the Philadelphia General Hospital about 1936. This was in the formative period of pneumonectomy for cancer of the lung. Lobectomies were not performed at this time for this

Read before the Alabama Surgical Section, United States Section, International College of Surgeons, Mobile, October 4, 1958.

condition. It was difficult to decide at that time what type of operation should be performed. The selection of cases was also a difficult proposition on account of lack of experience. The morbidity and mortality were naturally high.

The results of treatment of carcinoma of the lung by means of cobalt have not been very encouraging. No cures in our experience have resulted from its use. It will relieve pain and dyspnea. This relief is found very often in the treatment of sulcus tumors and the anterior mediastinum. These observations were made as a result of the experience of Dr. Sklaroff, who is in charge of the cobalt unit in the Einstein Medical Center, Northern Division. The results from pneumonectomy are not much better, because I feel as a result of my own experience that no one surgeon can count the number of cures from pneumonectomy on the fingers of one hand.

Mediastinal Tumors. Mediastinal tumors are not too frequently encountered. The symptoms that result are usually due to compression of the tumor on important structures. When there is pressure on the recurrent laryngeal nerve, hoarseness and brassy breathing will result. Generally, pain does not result unless there is considerable pressure on the nerves. These tumors are usually found as the result of an x-ray examination of the chest. Substernal thyroid and other tumors may be mistaken for a mediastinal growth. Hodgkins disease, which may be considered under the general designation of lymphoma, may originate in the glands of the thorax.

Several years ago a case presented itself in an individual who was both deaf and dumb. She lived several years after the removal of the primary tumor, but fifteen years later there was a recurrence of the disease, and she died as a result of the disease affecting many glands situated in different parts of the body. Neurogenic and teratoid tumors constitute about twenty per cent of the mediastinal tumors. Some of these are malignant. Treatment consists in removal of the growth. If the growth is benign, a favorable result may be expected.

Esophagus. Many diseases of the esophagus, such as diverticulae, congenital malformations, hemorrhages from esophageal veins and carcinoma, must be operated upon. Briefly, diverticulae of the esophagus may be operated upon in one or two stages. The results of either operation are good. The late Dr. Thomas A. Shallow had an imposing array of nearly three hundred cases in which the one-stage operation was used. From the Lahey Clinic we learn that they prefer the two-stage operation with equally good results. Esophageal hemorrhages usually arise from the veins in the lower part of the esophagus. The diag-

nosis is not easy, on account of bleeding, which may occur in the esophagus and the various portions of the stomach and intestinal tract. X-ray will be of some assistance. Rubber bags passed into the esophagus, and then inflated to control hemorrhage, are not always successful. At best it is a temporary procedure. The shunt operation has been successful in some cases. Carcinoma of the esophagus is the most discouraging form of the disease in the experience of all physicians. Most often it is encountered too late for remedial measures. The operations for temporary relief do not give gratifying results. The excision of the diseased portion of the esophagus and the substitution of a plastic tube, specially advocated by Berman of Baltimore, has only given temporary relief. If a perfect anastomosis is not made, there will be leakage into the mediastinal incision, and possibly death will result. When the operation is successful, there is only limited relief on account of a morbidity that follows this procedure. An anastomosis, by bringing the stomach or jejunum to the esophagus into the thoracic cavity, is the logical means of restoring function. These anastomoses are not often successful.

In 1914 Frank Torek devised a method of exteriorizing the esophagus and attaching a tube from the superior portion of the cut end of the esophagus to the stomach. This operation gave temporary relief. About 1916 I performed this operation on several cases. The patients lived only a comparatively short time after this procedure. It was one of the most popular operations at that time to perform. The connecting tube in some patients was placed under the skin instead of putting it on the surface of the thorax and abdomen.

Heart. A great metamorphosis has occurred in the last ten or twelve years concerning surgery of the heart and its blood vessels. Before this time the most frequent operation performed on the heart and its lining was for adhesive pericarditis, a patent ductus arteriosus, and accidental injuries to the heart such as gun shot and knife wounds. In 1937 Dr. Russell S. Boles and I reported several cases of cardiolysis, pericardiotomy, and pericardectomy. To have suggested opening the heart or the pericardium except for accidents would have put the surgeon in the category of an unsound individual. The results from the operations mentioned above were excellent if the patients were transferred from the medical side of the house before edema and ascites affected the individual. The contributions of the operations on the heart were brought forward mainly by Charles H. Bailey of Philadelphia, Cutler of Boston, and Blalock of Baltimore. The operations of commissurotomy for mitral stenosis, the various operations for the repair of the septa and valves of the heart, and sub-

stitutions of blood vessels from the blood bank and the blood vessels made from nylon and other materials have revolutionized surgery of the heart and its blood vessels. In the early days the operation of decortication was a successful one if performed in time. Practically the only other operation performed on the heart was for a patent ductus arteriosus.

The tremendous advances in the treatment of aneurysms of the aorta, thoracic and abdominal, have also created a milestone in the surgery of blood vessels. As an intern in 1900 in the Philadelphia General Hospital and for many years thereafter, Drs. Hobart A. Hare and Henry D. Jump filled the aneurysmal cavity with wire. An electric current was attached to the wire in some cases, which was supposed to coagulate the blood faster. In 1935, as Attending Surgeon to the Philadelphia General Hospital, Dr. Jump referred a case to me with a large bulging tumor of the chest. I aspirated and found pus. The sac was operated on, and a large aneurysm was found. The gush of blood from this area was tremendous. Placing the fist in the aperture controlled the hemorrhage, and gave sufficient time to apply stitches to the aneurysm. The patient lived two years afterwards, was readmitted to the hospital, and while in the hospital the aneurysm ruptured, followed by death.

CONCLUSIONS

In the past twenty-five years many changes have been made in the treatment of pulmonary tuberculosis.

Time will tell whether lobectomy and/or pneumonectomy will be a better procedure than the old and tried operations for the arrest of pulmonary tuberculosis.

Carcinoma of the lung is a rather discouraging disease to treat by operation or x-ray and the use of the cobalt unit.

Mediastinal tumors, when benign, usually relieve the patient of all symptoms. The malignant types, such as Hodgkins disease and carcinoma, are in the same category with all types of this disease.

Congenital malformations of the esophagus are now curable if detected early.

Carcinoma of the esophagus is one of the discouraging diseases as far as a cure is concerned.

The operations upon the heart in the early days were those for the relief of adhesive pericarditis. A few cases of patent ductus arteriosus presented themselves.

The modern treatment of aneurysms by means of anastomosis of plastic materials is far superior to the old method of filling the cavity with wire.

Behrend, Moses: The Efficacy of Thoracoplasty in the Treatment of Tuberculosis, *Dis. of Chest*: Vol. IV: No. 5, May 1938.

Behrend, Moses: Extrapleural Pneumothorax, *J. Internat. Coll. Surgeons* 3: 133-137, April 1940.

Behrend, Moses: Total Pneumonectomy for Pulmonary Tuberculosis, *J. Thoracic Surg.* 12: 484-494, June 1943.

Behrend, Moses, and Behrend, Albert: Total Pneumonectomy, *Arch. Surg.* 38: 698-713, April '39.

Behrend, Moses, and Behrend, Albert: Surgical Thoracic Tumors, *J. Internat. Coll. Surgeons* XI: Sept.-Oct. 1948.

Behrend, Moses, and Boles, Russel S.: Aneurysm of the Thoracic Aorta; Report of a Case With Surgical Intervention, *Am. J. Surg.* 1: 86-89, Oct. 1935.

Idem: Indications for the Operations of Cardiomyolysis, Pericardiotomy and Pericardiectomy: *J. A. M. A.* 108: June 5, 1937.

Behrend, Moses; Custer, E. W.; Gorman, Henry A., and Behrend, Albert: The Changing Pattern of Collapse Therapy in the Treatment of Tuberculosis, *J. Internat. Coll. Surgeons*, Jan.-Feb. 1942.

Behrend, Moses, and MacBride-Dexter, Edith: Treatment of Tuberculosis in the Commonwealth of Pennsylvania, *Pennsylvania M. J.*, September 1939.

Behrend, Moses; Meade, Richard H., Jr., and Lewis, Rubin M.: Thoracoplasty in Tuberculosis of the Lungs (A Review), *Dis. of Chest*: Vol. III, No. 9, Sept. 1937.

Behrend, Moses; Meade, Richard H.; Lewis, Rubin M., and Behrend, Albert: Surgical Collapse Therapy for Pulmonary Tuberculosis in the Philadelphia General Hospital, *Dept. of Public Health Bulletin*, 1938.

Behrend, Moses; Meade, Richard H., Jr.; Lewis, Rubin M., and Behrend, Albert: Review of Five Years Service 1933-38, *Div. of Thoracic Surgery, Dept. of Tuberculosis, Philadelphia General Hospital, Health Bulletin, Dept. of Public Health*, Jan. 1940.

Berman, Edgar: The Experimental Replacement of Portions of the Esophagus by a Plastic Tube, *Am. J. Surg.* 135: 337-343, March '52.

Johnson, Julian, and Jensen, Jay M.: The Mediastinum. *Pennsylvania Cancer Manual*, Chapter XVII, 1958.

Lahey, Frank H.: Esophageal Diverticula. *Surgical Practice of Lahey Clinic*, 1941, 141-165.

Shallow, T. A.: Combined One-Stage Pharyngeal Diverticulectomy; *Pennsylvania M. J.* 52: 147-148, 1949.

The average person today sees his doctor about five times a year, Health Information Foundation reports. In the aggregate, Americans use between 800 and 850 million physician visits a year.

The typical American nowadays sees a physician almost twice as often as did his counterpart 30 years ago, according to the Foundation—almost 5 visits per person a year today compared with only 2.6 in the 1928-31 period.

Persons in low-income groups now see a physician almost as often as those in high-income groups. Thirty years ago, by contrast, high-income families averaged about half again as many visits to doctors as did those with the lowest incomes.

PEPTIC ULCERS ARE BAD

LAWRENCE W. LONG, M. D.

Jackson, Miss.

INTRODUCTION

"The prognosis in peptic ulcer is excellent for the immediate attack but poor for the future, in that recurrence is the rule. The course of the disease is characterized by remissions and exacerbations. The 'cures' for peptic ulcer are therefore infinite in number for it is easy to be misled by the 'therapeutic fallacy' and draw the erroneous 'post hoc ergo propter hoc' conclusion" (Cecil).

As Mark Twain said about smoking: it's easy to quit. He had quit a thousand times. So peptic ulcer can be made better by treatment but seldom permanently cured. Duodenal or gastric ulcer is a *surgical* disease. We see cases who have been treated for as long as thirty years who still have trouble, flare up acutely, bleed some, and some are medical and dietary cripples. There have been many types of diets and medicines developed and used. What then is necessary to be done to cure the peptic ulcer case? It is necessary to change the *anatomy* and the *physiology* by some means. This cannot be done by faith, psychiatry, diet or medicines. Then it must be done surgically. Many operations have been devised to do this, namely, Billroth I and II, Polya, vagotomy, vagotomy with antral resection, vagotomy with subtotal gastric resection, vagotomy with gastro-enterostomy, gastro-enterostomy with vagotomy, etc. Both anatomy and physiology are changed in the patient by these operations—some better than others, in our opinion.

PERFORATED PEPTIC ULCER

I. We should all agree that a perforated peptic ulcer requires immediate surgery. There is no argument here. The argument is the question of repair or resection. Ten per cent of our cases of repair have bled enough to require repeat surgical intervention within 14 days after the repair of the perforation, so we have adopted a plan to resect all of these cases instead of repair when seen before abscess formation, with no mortality and low morbidity. Our latest case was done 42 hours after symptoms of perforation developed. The peritoneum is the defense mechanism responsible for these results. Aspiration of all fluid and food particles possible beneath the diaphragm, the right and left sulcus and the cul-de-sac is always done, with removal of all evident gross contamination and closure *without* drainage. The patient is always given penicillin and streptomycin by needle,

as well as the usual postoperative therapy following a gastric resection.

GASTRIC ULCER

II. We should all agree that gastric ulcers, when known to be present, should be excised by surgery because of their potential malignancy. No one yet has been able to say which comes first, the hen or the egg (the ulcer or the cancer), in dealing with this lesion in the stomach. Many ulcers seem to be healed radiographically but are not actually healed.

DUODENAL ULCER

III. This leads us then to duodenal ulcer and its treatment. The points of agreement for surgery by all seem to be (1) obstruction produced by scar tissue, (2) uncontrollable hemorrhage from the pancreaticoduodenal artery, but many agree that the second hemorrhage or repeated bleeding from this site in patients over 45, especially with sclerosed vessels that do not retract well, is also an indication, (3) while most agree that duodenal ulcers which will not get well under conservative management or stay well should be treated surgically. Our experience for the past thirty years leads us to exclude only one class of peptic ulcer from surgery in our clinic, namely, those produced by ACTH or drugs which heal well after withdrawal of the drug and do not return. We believe a *confirmed persistent duodenal ulcer* should be resected. We have been told that this is rather drastic and severe advice by some of our colleagues, but our experience has lead us to believe this to be sound advice. We note a good many people are doing this but not talking about it.

We believe that the Polya type of resection changes the anatomy and physiology, and we remove only 40% to 50% of the stomach in these cases. The intrinsic nerve supply to the first portion of the duodenum is interrupted but the vagus supply to the remaining portion of the stomach is not disturbed, yet the majority of the acid-bearing portion of the stomach is removed. As you know, the vagus nerve supplies many areas from the meninges through the neck, the thorax and the abdomen. When it passes through the diaphragm it is noted as the right vagus which supplies the posterior gastric plexus, and its branches supply the celiac plexus, pancreas, spleen, kidneys, adrenals, and intestine. The left vagus supplies the anterior gastric plexus and gives off the hepatic branches to the liver. We do not think it necessary or logical to disturb the nerve supply to the liver, pancreas, adrenals, etc.

Read before the Alabama Surgical Section, United States Section, International College of Surgeons, Mobile, October 3, 1958.

by a vagotomy when the gastric portion of the vagus can be severed at the point of severance of the stomach and therefore interrupt those fibers that go to the duodenum in its first portion. This means that the short gastric mesentery must be severed high. After the patient leaves the hospital Ventrilex Kapseals are used because of their antianemic factors of ventriculin, vitamin B₁₂, folic acid, iron and vitamin C along with a carbohydrate—1.0, protein—1.5, and fat—2.0 diet which, in our opinion, prevents the so-called dumping syndrome caused by too much carbohydrate in the jejunum.

We do not agree with the antral resection plan, placing the duodenum back into the food stream, because many ulcers we see are low in the duodenum and are not resected but heal when removed from the food stream by a duodenal exclusion type of resection. Our youngest patient requiring surgery was 18 years of age and is now 38 years of age and free of trouble for 20 years. We have been fortunate in not having marginal ulcers occur either.

So, in conclusion, we believe what is good for the worst cases is better for the best. Let us take a second look at our methods of treating patients with peptic ulcers with the idea of treating the cases so that they can live a normal life rather than one on medication, diet and psychotherapy many years and then coming to surgery for eventual relief. When we are satisfied that the patient has a peptic ulcer in which either symptoms or x-ray evidence persists, we then advise a gastric resection. It is time to erase the ground rules set up in our schools and hospitals as they train young men. It is time to stop the internists from treating these patients for recurring ulcer symptoms for years and then using surgery as a last resort. The present development of anesthesiology, surgery, and ample blood supply lessens the burden on the surgeon and minimizes the morbidity for the patient.

Surgery for peptic ulcer is not a last resort but a means of offering the patient a cure of his disease, which is a surgical disease and not a medical disease.

Histoplasmosis, "a chest disease of growing importance," has often been confused with tuberculosis, according to the publication *Patterns of Disease*, prepared by Parke, Davis & Company for the medical profession.

The disease, acquired by inhalation of spores which get into the air from the soil, has afflicted an estimated 30 million Americans. Highest incidence in this country is in the central Mississippi River Valley and the valleys of the Missouri and Ohio rivers. Its incidence has been shown to be related to the weather, being greater in areas with a high yearly concentration of warm, humid days.

New Guide Outlines Driving Fitness Requirements—
A new guide to assist physicians in determining the fitness of motorists to drive has been published by the American Medical Association.

The guide, which appears in the March 14 Journal of the A. M. A., was prepared by the committee on medical aspects of automobile injuries and deaths, following a two-year study.

According to the committee, the purpose of the guide is to call attention to the areas in which the medical profession may be of help in combating the serious health problem caused by the large number of automobile accidents.

In an accompanying editorial, the committee said, "Injuries suffered in automobile accidents are an important health problem in the United States. About 37,000 persons were killed in automobile accidents in 1958 and about 5 million were injured seriously enough to require medical attendance or restriction of their activity for one day or longer.

"Human failure," the report noted, "overshadows all other factors in the production of highway accidents. The human mechanism must be in good condition to cope with the split second timing needed to maneuver high speed motor vehicles.

"The key to ultimate success in automobile accident prevention lies in the driver—his intelligence, his sense of personal and social responsibility, his reactions to various stimuli in normal conditions and under stress, and his driving ability in good health and in illness."

In general, the guide stated, an individual should be assessed medically to determine the answers to the following questions:

—Has the patient any physical and mental ability to manipulate the controls?

—Is the patient likely to suffer excessive fatigue that will impair his driving ability?

—Does the patient have the required vision and hearing for safe driving?

—Has the patient any physical or mental disorder likely to cause confusion or a sudden loss of consciousness while driving?

—Is the patient likely to suffer a temporary impairment of mental, physical, or functional capacity due to alcohol, drugs, infections, or medical treatment?

—Does the patient have good emotional control or has he signs of antisocial behavior or an emotional disturbance making it unsafe for him to drive?

The committee said that the physician is qualified by training to ascertain the physical, mental, emotional, or physiological impairments of an individual. He is in a good position to evaluate these impairments in relation to safe driving ability.

Frequently, it may be necessary for a physician, recognizing his responsibility for the safety of his patient and the public, to caution the patient against driving for a certain period of time or even permanently.

In conclusion, the committee said, "It is probable that the next decade will see a greatly increased emphasis upon more stringent physical standards for licensing. It is believed that more and more patients will turn to their physicians for advice and assistance in this regard.

"On the basis of present knowledge, it is believed that a conscientious medical evaluation of the individual's fitness to drive safely, with appropriate follow-up, can reduce motor vehicle accidents very significantly."



MARRIAGE IS A GOOD INVESTMENT

Diamonds may be a girl's best friend, but marriage seems to be the best investment for the man who values his health.

The Health Insurance Institute reports that although married men enter hospitals more frequently than bachelors, their length of stay is decidedly shorter, which indicates, among other things, that wedded gentlemen have their medical needs cared for while still comparatively minor.

The Institute report, based on a July 1958 study by the U. S. Department of Health, Education, and Welfare, shows that hospital utilization rates offer one explanation for the long-established fact that married folk live longer than bachelors and spinsters.

The government survey reveals that there were almost nine hospital admissions for every 100 married men in the general population during the 12-month period ending September 1956, as compared to nearly seven for every 100 unmarried men. However, the average days of stay for each admission was 10.8 for the married men compared to 14.6 for the bachelors.

A more striking example was offered by those unmarried men who also were without health insurance protection. In this grouping there were just over six admissions for every 100 men but the average stay per admission was 20.6 days.

"Seemingly," the government report states, "this group entered the hospital only when so seriously ill that a prolonged stay was a frequent occurrence."

By the time men reach the age of 65 and over, bachelors not only have longer hospital stays but they also are admitted to the hospital at a more frequent rate than married men, almost 16 hospitalizations per 100 to a little better than 13 in 100. The report adds, "The absence of a spouse probably made use of the hospital unavoidable in some instances."

The statistics for length of stay also show that older bachelors probably waited longer before seeking medical attention for their ailments. The married male senior citizen stayed an average of

Editorials

12.5 days. His single brother was hospitalized 22.1 days.

These days added up to an imposing hospital utilization rate for men 65 and over. The annual in-hospital days for 100 married men of this age group was 165 days, but still less than half of the total of over 348 days for bachelors, or the total of 375 for bachelors without insurance.

When an age breakdown limited to those 14 years of age and older is used, the highest utilization rate once again is for men both unmarried and uninsured, nearly 128 days in the hospital per 100 persons.

INCREASED BASIC KNOWLEDGE NEEDED

Declaring that in modern medicine it is basic knowledge that needs to be increased "as rapidly as possible," the nation's drug manufacturers have urged the government to give top priority to basic medical research programs.

In a 1000-word Statement of Principle, the Pharmaceutical Manufacturers Association warned that the U. S. faces a 25 per cent deficit in the number of medical scientists needed by 1970. Therefore, the association said, the government must also give highest priority to programs which would lead to the training of additional teachers and researchers.

The P. M. A. said that pharmaceutical industry laboratories should not receive government subsidies except for those "exceptional cases" in which U. S. agencies cannot find a non-profit institution capable of turning out the required research. As a matter of fact, the P. M. A. declared, research subsidies to drug firms rather than to academic institutions would probably result in further depletion of an already-dwindling supply of scientists in non-profit centers.

The P. M. A. said its "Statement of Principle on Government Support of Medical Research" has been mailed to members of Congress, White House advisers on science, and to leading researchers and medical educators. A number of points in the P. M. A. statement were elaborations on the findings of a recently disbanded top-level government advisory committee, the "Consultants on Medical

Research and Education to the Secretary of the Department of Health, Education, and Welfare." This committee is generally called the Bayne-Jones Committee after its chairman, Dr. Stanhope Bayne-Jones, formerly dean of the School of Medicine, Yale University.

The Pharmaceutical Manufacturers Association quoted the Bayne-Jones Report in pointing out the phenomenal growth of government support to medical research—from a scant \$3 million in 1940 to an estimated \$227 million in 1958.

"The pressures upon the Congress and upon federal agencies for practical results are apparent," said the P. M. A. statement, "and unquestionably will increase in direct relation to the size of the expenditures. But as the Bayne-Jones Report states, 'pressures for practical results cannot be allowed to supersede the fundamental kind of studies which, over the long-run, produce revolutions rather than merely improvements in health standards'."

Since it is the non-profit research institution which, by its very nature, deals with basic studies, it is these centers rather than the drug industry's laboratories which should receive federal support. Moreover, it is the non-profit research institution which serves as the training center for all medical scientists—whether they subsequently turn their attention to applied or to basic research.

Explaining the pharmaceutical industry's function in the nation's medical research picture, the P. M. A. pointed out that the industry in 1958 spent "at least" \$170 million on research. Some of this went for basic investigations, but the bulk of it—by the very nature of the drug industry—was highly advanced scientific research whose direct aim was to find "clinically useful products."

But, said the P. M. A., whether in industry's laboratories or in academic laboratories, "the paramount problem is undoubtedly the critical shortage of scientific personnel. The extent of the personnel shortage is well documented: The Bayne-Jones Report indicated that 25,000 additional scientists will be needed by 1970, but that present training facilities will provide only 19,000. . .

"Government subsidies for industrial research will still further accentuate this manpower problem," the P. M. A. statement went on. "It must be recognized that there are only three ways by which a pharmaceutical firm can staff a government-subsidized project. The first is to divert its own scientists from projects on which they are already working. The second is to obtain additional personnel from other firms, which results in a wasteful pattern of raiding. The third—easiest, but most destructive—is to obtain the needed people from academic life, thus depleting still fur-

ther the supply of teachers and scientists engaged in basic research."

On the question of government-industry "crash" medical research programs, the statement recognized that the P. M. A. stand is contrary to "the current trend . . . in electronics, aircraft and other fields of research." But the critical manpower needs—and above all, the critical need to build up academic centers—indicate the wisdom of subsidization only "where no non-profit institution can do the job."

"In such exceptional cases, however, full cooperation can be expected from a pharmaceutical firm approached by the federal government because of its unique qualifications," the P. M. A. declared.

One of those exceptional cases, said the P. M. A. statement, is the current government-industry cancer chemotherapy program, in which the National Institutes of Health have made grants to various pharmaceutical firms to participate in an experimental mass screening program of all types of chemical agents. Here, said the P. M. A., subsidization can be considered justified "in view of the lack of leads after so many years of effort and the nature of the 'problem'."

"In fields other than cancer," the P. M. A. said, "the pharmaceutical houses are pushing the search for new drugs with adequate funds and with every means at their disposal in the light of present knowledge. It is our basic knowledge that needs to be increased as rapidly as possible, and federal funds should be channeled to academic institutions which need them to support and expand their basic research."

DIETARY MANAGEMENT OF HYPERCHOLESTEROLEMIA

A significant decrease in blood cholesterol levels can be secured simply by substituting a new table-spread and shortening rich in polyunsaturated fatty acids for solid fats in the diet, a physician reported in the February issue of *Geriatrics*.

Many investigators, both in this country and abroad, have pointed out a positive correlation between high cholesterol levels and a high incidence of atherosclerosis, the most common and serious form of hardening of the arteries, according to the article. (Atherosclerosis is the cause of nine out of ten heart attacks, it is estimated, and of most strokes.)

The study, conducted by Dr. Louis A. Terman, a member of the staff at Columbus Hospital, Chicago, was unusual in that only the kinds of fats, not the amount, was changed in the diet. The reduction in cholesterol levels was brought about by replacing solid fats with a new margarine made from nonhydrogenated corn oil and therefore rich

in polyunsaturated fatty acids. The margarine, produced by Pitman-Moore Company, a division of Allied Laboratories, Inc., and known as Emdee, is sold only in drugstores.

The tests ran sixty days and covered fifteen patients in a convalescent hospital. Average cholesterol was 277 milligrams for all individuals while on the regular diet in the first ten-day period, Dr. Terman reported.

Then for thirty days the new margarine was served as a table spread and used to replace solid fats as a seasoning for vegetables and in all baking and frying. No other diet changes were made. Salad dressings were based on corn oil throughout the study.

Average serum cholesterol values, Dr. Terman reported, were noticeably reduced, "becoming statistically significant at the end of the second ten-day period and showing increased significance at the end of the third ten-day period." Average value at the end of the period was 216 milligrams, an average reduction of 22 per cent.

During the thirty days, "no other part of the dietary regimen was altered," the report stated. "The kitchen staff prepared the same dishes and served the same kind and cuts of meat as before, without removing any more visible fat, and continued to use whole milk generously as a beverage and in cooking."

Records on fat and oil used by the kitchen showed that, on the basis of weight, the amount of these substances used each week was the same during the time the new margarine was used as it was while regular menus were served.

According to the article, the group apparently found no difference between meals using the new margarine and their regular fare, whereas the usual low-fat diets employed to reduce cholesterol levels are unpalatable and monotonous.

When the group returned to its usual diet, "a pronounced rise in cholesterol levels was seen in all but one of the patients within ten days," Dr. Terman reported. "The average value for all patients had risen 22 per cent, to a level of 265 milligrams, and it was still at that level ten days later."

Dr. Terman based the study on reports that removal of foods high in saturated fatty acids from the diet has a greater effect on reducing serum cholesterol levels than does the inclusion of foods high in unsaturated fatty acids. Furthermore, the combination of the two plans was found more effective than either alone. These findings led to the study with the new margarine, in which only the kinds of fats and not the amount was changed in the diet.

CANCER PROSPECTS

Although great progress has been made recently in cancer research and treatment, this disease constitutes a "steadily increasing health problem" in this country, according to Health Information Foundation.

In its monthly statistical bulletin, *Progress in Health Services*, the Foundation pointed out that more than 250,000 Americans died of cancer last year. The present death rate is about 60 per cent higher than the 1900 rate. During the last half-century cancer has risen from seventh to second leading cause of death.

Certain types of cancer—notably leukemia and cancer of the respiratory system—have become steadily more important causes of death in the last 25 years, the Foundation report stated.

On the other hand, cancer of the digestive system has shown a relative decline during the same time period, although it still kills more people than any other type of cancer. Cancer of the digestive system caused half of all the cancer deaths in 1930, but only one out of three such deaths in 1958.

Another cancer trend noted by the Foundation is a shift in the sex ratio. Early in the century more of the cancer victims were women, but the male mortality rate now exceeds the female by 22 per cent.

The mortality rate for women has been declining since the 1930's. In contrast, said the Foundation, male mortality from cancer has continued to rise—"in part because of the rapid rise of respiratory cancer among men, but also because in general cancers afflicting males more often occur in less accessible sites."

George Bugbee, Foundation President, commented that "although cancer is an increasingly serious health problem for the population as a whole, the prospects for the individual cancer victim are brighter today than ever before.

"Whereas a few years ago only one cancer patient out of every four survived for five years or more, now the record shows one of every three so surviving. Thanks to modern methods of treatment, an estimated 150,000 individuals were saved from cancer deaths last year."

The picture would be brighter, Mr. Bugbee continued, if more people saw their doctors for regular checkups so that the disease would more often be diagnosed in its early stages. He cited a recent survey, sponsored by the Foundation and conducted by the University of Chicago's National Opinion Research Center, which showed that 45 per cent of the persons in the 65-and-over group had not had a medical checkup for five years or more. A quarter of all the older people had never

had such an examination. Yet more than half the cancer deaths nowadays occur among people in this age group.

"Medical knowledge has advanced so much recently that the public has reason to expect that better ways of diagnosing and curing cancer will soon be found," Mr. Bugbee added. "For the foreseeable future, though, the main hope for any individual lies in early detection of the disease. The person who fails to consult a physician regularly is depriving himself of the benefits modern medical science could give him."

TEXAS STUDY FINDS ORINASE EFFECTIVE

Seventy-three per cent of the patients in a Texas study of the oral hypoglycemic drug, Orinase, achieved "smooth and effective control" of diabetes far surpassing that previously experienced with the use of insulin.

These results were reported in the December 1958 issue of the Southern Medical Journal under the title "The Apparent Superiority of Tolbutamide (Orinase) Over Insulin in the Regulation of Selected Clinic Patients."

Ninety-six of the 100 patients involved had been taking from 5 to 50 units of insulin per day.

Reported Drs. Roger H. Unger, Leonard L. Madison and Manuel Amil of the University of Texas Southwestern Medical School: "Of importance is the excellent degree of control of fasting blood sugar obtained in the majority of these subjects, most of whom had been regarded as unsatisfactorily controlled with insulin. . . ."

The subjects were outpatients of the Parkland Memorial Hospital Metabolic Clinic. Many of them were described as presenting problems common among indigent diabetics—poor cooperation, language barriers, illiteracy, reluctance to follow a diet, blindness and other physical disabilities.

Summarizing results, the report said the 73 patients on whom Orinase was used successfully achieved "smooth and effective control surpassing by a wide margin that of prior insulin regulation in these same subjects."

Advantages of Orinase were described as including greater ease of administration and freedom from serious hypoglycemic reactions.

Two cases of urticaria were listed as the only "toxic" reactions to Orinase observed in the tests.

Of the 73 patients successfully treated with the oral drug, all achieved mean fasting blood levels of 150 milligrams or less and 47 per cent averaged below 125 milligrams per 100 cc.

The researchers said that a single dose of Orinase taken at bedtime had proven to be both effective and convenient.

"Any stable, potentially responsive diabetic who, despite an appropriate diet, exhibits significant fasting hyperglycemia, deserves a trial of tolbutamide therapy," the report stated.

It added that conversion of such diabetics to Orinase is indicated if insulin reactions have been a problem, particularly in the arteriosclerotic age group.

The authors said discovery that delay in a meal or the performance of unusual exercise will no longer result in severe hypoglycemia is extremely gratifying to patients transferred to Orinase.

"Secondly," they declared, "it is our impression that in certain poorly controlled diabetics who appear to be hyposensitive to exogenous insulin, tolbutamide may provide more effective control."

"Finally, when insulin allergy exists in a stable diabetic, tolbutamide should be tried."

SILVER ANNIVERSARY AMERICAN COLLEGE OF CHEST PHYSICIANS

The American College of Chest Physicians will hold its Silver Anniversary meeting at the Ambassador Hotel, Atlantic City, June 3-7, 1959. The scientific program will include prominent speakers on all aspects of heart and lung diseases. In addition to formal presentations, there will be a number of symposia, round table luncheon discussions, postgraduate seminars, and motion pictures.

Fireside conferences, inaugurated in 1955, will feature more than 60 experts in chest disease leading discussions on topics of current interest.

Examinations for fellowship in the College will be held on Thursday, June 4, and on Thursday evening, more than 200 new Fellows will receive their certificates of fellowship at the convocation. The Presidents' Banquet and annual dance will take place on Saturday, June 6.

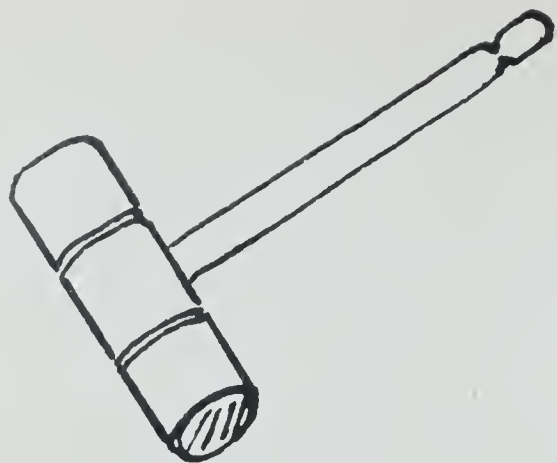
It is expected that a number of physicians from other countries will attend the 25th annual meeting.

Dr. Donald R. McKay, Buffalo, New York, President of the College, has announced that to commemorate the Silver Anniversary, the College is publishing a history of the growth of the organization since its first meeting in 1935.

Tuberculosis as a cause of death has declined from first to 13th place in the past 50 years, but one case is reported every five minutes, according to the publication *Patterns of Disease*, prepared by Parke, Davis and Company for the medical profession.

In the past 20 years alone the number of tuberculosis deaths has dropped about 80 per cent, it reports. The number of newly reported cases, however, has declined only about 20 per cent in the same period.

Over 75 per cent of deaths due to tuberculosis occur among persons 45 years of age and over.



President's Page

This issue marks the completion of my year as your President. It has been a rewarding experience and I shall always be grateful to you for electing me. When I review the year's work I am pleasantly surprised by the amount that we have accomplished. All of the committees have been active. Some of the projects undertaken have not been completed and will be continued during the coming year. I feel that the outstanding accomplishments of the year have been the building of our home and the proposed changes in the medical practice act which will be presented to the Legislature. I cannot commend too highly the building committee for its work in erecting the building. The plan for financing the building which will have it completely paid for in two years is nothing short of remarkable. As you know, we are now using the building. It adequately meets our needs at this time and the architectural design provides for an addition to the building when our needs demand it. The legislative committee spent many hours drawing up the proposed changes in the medical practice act. When the changes were presented to the Counsellors and voting delegates of the Association on February 15 I was pleased that they were approved, not unanimously but certainly by an overwhelming majority of those present. With this support from the profession throughout the state I feel that the chance of getting the Legislature to pass the bills is good. I shall not discuss the work of the other committees at this time but I can say it has been good, and I take this opportunity to thank the various members. Acting as your President for the year has

also made me well aware of the importance of the executive secretary and his staff in carrying out the work of the Association. I wish to commend Mr. Dozier and his staff for the excellence of their work.

In the program for our annual meeting we saw fit to include an indoctrination seminar for the new members of the Association. This is the third year that we have had this seminar which is designed to acquaint the new members with the mechanics of the Association and to explain its unique position in the public health program of the state. A doctor's moral obligation to his patient and to his profession will also be discussed. A full appreciation of this obligation cannot be acquired at a seminar; it rather comes from contact with patients. As a doctor's years in practice increase and his contacts with patients and their illnesses multiply, the sense of this obligation grows and becomes a compelling force. As I have seen it in the members of this Association it has been a force for good. It is a force that we should be justly proud of and jealously guard. As an Association we should continue to encourage the highest moral and ethical standard in our members and never fail to discipline the member who does not live up to our standards.

Colgan J. Durbin



ORGANIZATION SECTION

SPECIAL MEETING OF FEBRUARY 15, 1959

The Association met in special session to consider three proposed legislative bills. The meeting was held in the State Office Building and was called to order by President Edgar G. Givhan. In attendance were fifty-two Counsellors and forty-seven Delegates.

Dr. M. Vaun Adams, Chairman of the Committee on Legislation, explained that, upon recommendations from the Association's Committee on Legislation, the State Board of Censors has had three proposed bills prepared by the office of the Attorney General; namely, a basic science bill, a bill providing for a state licensing board for the healing arts, and an amended medical practice act of Alabama. He explained further that these bills would set up a state board of basic science examiners, a state licensing board for the healing arts, and would make necessary changes in the present medical practice act to bring it in line with the two new proposed boards. Dr. Adams reviewed each section of the three bills.

Dr. Paul W. Burleson commented on indications favoring the proposals. He pointed out that they are very similar to the law now in operation in the state of Tennessee, and that the Tennessee law has proved very successful. Dr. Burleson stated that this is the first time the Association has actually presented a possible solution to certain problems in connection with licensure in this state, and that the Association feels the type of legislation proposed can be effective.

Dr. J. Michaelson presented the unfavorable indications of these proposals, expressing the opinion they would not be the complete answer to the problems confronting the Association in the field of licensure.

There was a general discussion by the voting body in which questions were presented to the discussants and Dr. Douglas L. Cannon for clarification. Following the discussion period, it was moved by Dr. Amos C. Gipson, and seconded, that the Association approve the three proposed bills. By voice vote the motion prevailed.

It was requested that the central office furnish each voting member in attendance a list of the names of the members of the Committee on Health of the State Senate and House of Representatives.

The meeting was adjourned.

COMMITTEE ON PUBLIC RELATIONS

SPEAKERS BUREAU

During the second year of operation, the Speakers Bureau of the Association supplied approximately 50 speakers for civic, study and garden clubs, nurses associations, University Women and parent-teacher groups. It is felt that there were at least 50 other speeches made by physicians who failed to notify the central office. Requests have run through the entire range of subjects offered by the bureau.

Plans are under way to revise the brochure "Your Doctor Speaks" and bring the list of speakers up to date. When this is accomplished, a second letter will go to all clubs, parent-teacher organizations and Medical Association Auxiliary groups in the state, informing them of the service.

An interesting sidelight on coordination of the work in public relations is the fact that the need for revision of the brochure was brought out during a discussion among representatives of the Association and of Alabama Polytechnic Institute early in the year. An API representative asked, "What is carcinoma of the lung?" Therefore, it is the consensus of the PR Committee that the term cancer be substituted for carcinoma and that other changes be made when the pamphlet "Your Doctor Speaks" is revised.

FAIR EXHIBITS

The Association will have an exhibit on weight and diet at the Health Fair which is to be held at Birmingham, May 15-17. The booth will be manned by members of the Jefferson County Medical Society and their wives. The exhibit is designed to catch the eye of the public with balance scales for weighing visitors; literature that is interesting in appearance and content will be distributed.

As this issue goes to press, an exhibit on the new building of the Association is being prepared for the annual session.

HEALTH BULLETIN FOR TEACHERS

Under the Association Forum in the January 1959 issue of the *Journal* was reprinted an article from *Health Bulletin for Teachers*. This is a publication of the Metropolitan Life Insurance Company which it has made available for thirty years. It is primarily designed to help high school science

teachers emphasize the health aspects of their science teaching and has a distribution of more than 400,000 copies four times a year. Metropolitan asked the help of the Association in placing this booklet in the hands of Alabama teachers and it was studied and evaluated by the committee. The superintendents of education in the state were requested to cooperate by furnishing a roster of their teachers if they desired to have them receive the pamphlet. The response was good; and as a result of the cooperative efforts of the three organizations involved, more than half of the teachers in the state are now receiving this help. Rosters continue to come in, and probably all sections of the state will be covered in the near future.

YOUR HEALTH

A column for newspapers, "Your Health," is mailed each week to 52 newspapers in the state. The recipients of the material were selected through a survey. The content of the column is taken from material prepared by health authorities and edited in the state office. This service has been rendered for several years, and recently a second survey was conducted to determine how many of the newspapers were using the releases. The majority responded that they printed the material at least part of the time, and it was decided to continue the service. Through this medium, authoritative health information is made available to the reading public.

ANNOUNCEMENTS

APPOINTMENTS

Dr. L. M. Barger, Jr., Birmingham, has been appointed to represent the State Medical Association on the executive council of the Cardiac Clinic's program.

Dr. Julian P. Howell, Selma, and Dr. E. B. Glenn, Birmingham, have been appointed to the advisory committee for the indigent hospitalization program. Act No. 394 of the 1957 Regular Session of the Legislature created an advisory committee to consult with and advise the State Board of Health on matters of policy, administration, procedures and other matters pertaining to the administration of the act which provides for the hospital service program for indigent residents of the state.

MEETING DATES

The Alabama Division of the International College of Surgeons will hold scientific sessions at Huntsville, May 21-22.

The Alabama Pharmaceutical Association will meet at Point Clear, June 16-18.

The American Board of Obstetrics and Gynecology announces that the next scheduled examinations (Part II), oral and clinical, for all candi-

dates will be conducted at the Edgewater Beach Hotel, Chicago, Illinois, by the entire Board from May 8 through 19, 1959. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who participated in the Part I Examinations will be notified of their eligibility for the Part II Examinations as soon as possible.

The deadline date for the receipt of new and reopened applications for the 1960 examinations is August the first, 1959. Candidates may submit their applications at any time before that date. Further information may be had from Dr. Robert L. Faulkner, M. D., Secretary, 2105 Adelbert Road, Cleveland 6, Ohio.

Use of Safety Closures for Drug Containers Advocated—Widespread use of safety closures for drug containers is advocated by a North Carolina pediatrician.

Dr. Jay M. Arena, Durham, N. C., feels that the adoption of safety closures for all drug containers in common home use could reduce the number of cases of accidental, experimental, and innocent ingestion of potentially poisonous drugs.

His observations are reported in the March 14 Journal of the American Medical Association, following a study of 1,600 homes with children under five years of age.

Accidental ingestion of drugs, Dr. Arena pointed out, causes 35 per cent of the deaths from poisoning of children in the one to five age group. Incidence of poisoning from drugs is much greater than from household agents.

He said, "There is little wonder that poisoning is so frequent in infants and children who learn by exploration, questioning, sampling, and trial and error. They are particularly susceptible to the accidental ingestion of brightly colored, attractively shaped and packaged, sugar-coated drugs of all kinds."

To overcome this problem, Dr. Arena believes that all available safety measures and precautions should be utilized. Education alone is not enough. "Precautionary labeling and safety closures are good measures . . . in the prevention of these tragic accidents," he added.

Purpose of the study was to test three closures—two of the safety cap variety and one conventional screw cap—to determine which would be the most effective in reducing the chance of small children gaining access to drug containers.

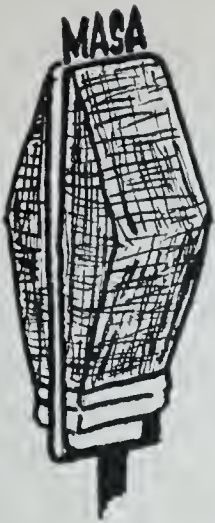
It was also necessary for these safety caps to be designed and constructed so that mothers could remove and replace them with a reasonable amount of ease and convenience, the doctor said.

As a result of the study, Dr. Arena favors the use of a plastic, snap-on type cap. He said that this closure proved to be the most difficult for children to remove and the easiest for them to replace.

The doctor feels that the ability of easy replacement is valuable since it implies that older inquisitive children can prevent younger infants from gaining access to containers.

In addition, this cap was voted by mothers as the one which they felt was the easiest to securely replace. This is significant, Dr. Arena said, since a loose cap means an open container.

He considered that the children's difficulty in removing the plastic cap and their mothers' ease in removing and replacing the closures made it the choice from both the manufacturers' and the families' standpoints.



ASSOCIATION FORUM

THE ALABAMA PROGRAM OF THE AMERICAN CANCER SOCIETY

*(Prepared for the Journal by the state publicity office of
the American Cancer Society, Alabama Division, Inc.)*

The American Cancer Society, Alabama Division, Inc., is dedicated to the cause of bringing America's number two killer under control through a three-point program of education, research and service.

One cancer patient in three is now being saved. A few years ago only one in four was saved. Today, half of those who get cancer could and should be saved through early diagnosis and proper treatment.

At current rates, this means that the immediate goal of cancer control in the United States is the annual saving of 225,000 lives, or half of those who develop cancer each year.

The importance of cancer control is emphasized in a special way during April of each year, which is designated by Presidential proclamation as Cancer Control Month.

This is the month in which the American Cancer Society conducts its annual educational and fund-raising crusade. While the Society's educational program is carried on around the calendar, a special effort is made in April to distribute life-saving cancer literature throughout the land while raising funds to support the ACS program.

Sixty cents of every dollar contributed stays within the state where it is given to further programs of education, research and service to patients.

Forty cents is administered by the national office of the Society for:

- an intensive nation-wide research program.
- professional education grants and clinical fellowships.
- program development to save lives from cancer.

A significant part of the American Cancer Society's effort is directed toward an important two-fold goal in the field of professional education:

To bring to the medical profession new information on cancer and the latest developments in diagnosis and treatment of the disease;

To train nurses and technicians for their roles in diagnosis and treatment, convalescence and recovery from cancer.

The program attack is advanced in the following ways:

Fellowships in all fields of clinical cancer;

Miscellaneous medical grants to organizations whose activities contribute to cancer control;

Publication of professional journals and periodicals;

Production and circulation of films, slides and exhibits;

Organization of professional symposia, refresher courses, conferences and meetings for doctors, dentists and nurses;

Training of technicians in cytology.

In the latest year for which figures are available (1957):

Every physician in the United States received special information about new developments in the diagnosis and therapy of cancer;

More than 2,100 meetings and symposia drew a record attendance of more than 85,000 physicians;

More than 18,000 dentists attended 156 professional meetings;

Some 90,000 nurses attended special meetings and seminars;

More than 235,000 doctors, dentists, nurses and medical students saw films and exhibits produced by the Society.

In this state, the Alabama division regularly sends to each member of the State Medical Association the publication "CA—A Bulletin of Cancer Progress."

Periodically the Alabama division also sponsors cancer seminars in cooperation with medical groups, such as the one held in Birmingham on January 28-29 of this year. Co-sponsors were the Alabama Academy of General Practice, American

College of Surgeons, Birmingham District Dental Society, Jefferson County Medical Society, the State Medical Association, and the Medical College of Alabama. The seminar was accepted for 10½ hours Category 1 credit by the American Academy of General Practice.

Dr. Paul G. Reque of Birmingham was program chairman for the seminar, and moderators were Dr. John Day Peake of Mobile, president, American Cancer Society, Alabama Division, Inc.; Dr. Joe Donald, Birmingham, vice-president of the Alabama division, and Dr. Champ Lyons, Birmingham, professor of surgery and chairman of the department, Medical College of Alabama.

Speakers were Dr. Alan Thal, assistant professor of surgery, University of Minnesota School of Medicine; Dr. George C. Andrews, clinical professor of dermatology, College of Physicians and Surgeons, Columbia University; Dr. Oliver Moore, assistant attending surgeon of the head and neck service at Memorial Hospital; Dr. Milton Friedman, professor of clinical radiology, New York University College of Medicine; Dr. Herbert E. Schmitz, vice-chairman of the Board of Governors, American Cancer Society; Dr. Louis A. Leone, associate professor of medicine, Medical College of Virginia; Dr. Warren H. Cole, head of the department of surgery, University of Illinois College of Medicine; Dr. W. W. Scott, urologist in charge, Brady Urological Institute, Johns Hopkins Hospital, and Dr. Thomas F. Nealon, Jr., assistant surgeon and assistant professor of surgery, Jefferson Medical College, Philadelphia.

The Alabama division of ACS carries on a number of special activities related directly to the care and treatment of cancer patients:

In Jefferson and Mobile counties, the division assists in the financial support of visiting nurses calling in the homes of medically indigent cancer patients.

The division provides advanced training for technicians in the field of cytology. The cytologic technique requires professional competence and training in the microscopic interpretation of malignant disease.

The Alabama division, upon approval of its board of directors, also pays for drugs, radon seeds, secretarial help and other needs requested by state-aid tumor clinics.

Many medically indigent cancer patients are treated without charge at the state-aid clinics. But some cannot afford even the transportation to the clinics. In many such cases, the Alabama division pays the transportation cost.

Upon request of the patient's physician, bandage and dressing materials are supplied without

charge to medically indigent cancer patients by the Alabama division.

The division also pays for pain-relieving medicines for medically indigent cancer patients, upon request of the patient's physician.

Requests for information on how to obtain aid for medically indigent cancer patients may be directed to Mrs. Lillian G. Meade, Executive Director, American Cancer Society, Alabama Division, Inc., 2029 Warrior Road, Birmingham, Ala.

In the field of cancer research, the American Cancer Society has spent more than \$1,275,000 in Alabama alone since 1945. Twenty-five cents out of every dollar given to the American Cancer Society is used for research. The Alabama division spends additional amounts for this purpose.

Cancer studies are supported by the Cancer Society at several Alabama institutions, including Alabama Polytechnic Institute, Auburn; Carver Foundation, Tuskegee; Medical College of Alabama, Birmingham, and Southern Research Institute, Birmingham.

Dr. John Day Peake of Mobile is president of the American Cancer Society, Alabama Division, Inc.; Dr. J. P. Chapman, Selma, Dr. J. M. Donald, Birmingham, and Mr. Henry P. Johnston, Birmingham, vice-presidents, and Mr. Fred A. Duran, Auburn, secretary-treasurer.

Directors are Dr. W. D. Anderson, Tuscaloosa; Mr. Joe A. Bailey, Mobile; Dr. Chapman; Mr. I. B. Cobb, Mobile; Mr. Redus Collier, Decatur; Col. C. W. Doughty, Jr., Gadsden; Mr. P. O. Davis, Auburn; Mr. Duran; Mr. E. C. Easter, Birmingham; Dr. D. G. Gill, Montgomery; Dr. T. Brannon Hubbard, Sr., Montgomery; Mr. Johnston; Dr. J. Paul Jones, Camden; Mr. Cyrus Kitchens, Oneonta; Dr. J. O. Morgan, Gadsden; Dr. Peake, and Dr. Howard E. Skipper, Birmingham. Judge J. C. McGough, Birmingham, is crusade director.

STATE HEALTH DEPARTMENT LAUNCHES NEW AFTERCARE PROGRAM

(Reprinted from Alabama Mental Health, published by the Division of Mental Hygiene, Alabama Department of Public Health)

The Alabama Health Department is working with State Mental Hospitals and community agencies to render special health services to the mental hospital patient and his family, from time of commitment and after discharge. The Health Department's Division of Mental Hygiene is coordinating the development of these special services in the health departments of three counties at the present time. These counties are Etowah, Jefferson and Tuscaloosa.

With modern treatment including tranquilizing and energizing drugs, mentally ill patients are re-

turning to their communities in increasing numbers. Patients who for some time, often years, have been separated from their communities are now going back to whatever home awaits them. The new program of community services designed to meet more adequately the needs of returning patients is called aftercare—aftercare of the family when the patient leaves and aftercare of the patient when he returns.

EDUCATION

Three different types of service are rendered by the participating health departments. First, the county health department seeks to develop community-wide awareness of the problems of the patient returning from a mental hospital—his need for a job and for medical services; his need to be wanted and accepted by his family, friends and neighbors. This is an educational job which falls primarily to the health department—an official agency—and to the mental health association—the community's voluntary agency.

COORDINATION

While the general public is being educated to the needs of the patient, the health department works to coordinate the efforts of all other community agencies which can potentially take part in the aftercare of the discharged patient. This coordinating effort may take the form of organizing an informal community-wide committee of agencies and groups—all of whom have a stake in the successful adjustment of discharged patients. Such a committee may have as one of its objectives, for example, the development of a foster home placement program for returning patients without families.

DIRECT SERVICES

In addition to educational and coordinating efforts, the local health department also administers certain direct services to the patient and his family. Sometimes these are psychiatric services rendered by the mental health clinics, but more often they are nursing services. The public health nurse plays a very large role in providing health supervision of the patient. For example, if the discharged patient is on continuous drug therapy, the nurse works with the family physician in the supervision of drug administration.

Family attitudes toward the returning mental hospital patient are very important to the mental health of the patient. These attitudes may make the difference between his staying out of the hospital or returning. If he loses his membership in the family unit because of their fears and superstitions about mental illness, then he is in danger of relapse. Here, again, the public health nurse helps by interpreting to the family what it means to be mentally ill. By her own accepting attitude toward the patient and his family, the nurse helps

reduce fears and feelings of stigma.

The objective of the State Health Department's aftercare program is, first, continued recovery of mental health by the discharged patient. The second goal is rehabilitation. The job is a big one, requiring the active participation of our State Mental Hospitals, county health departments and other community resources. The development and coordination of all efforts on behalf of the returning patient may well determine whether a patient stays in his home or suffers another breakdown.

Foot Care Rules Listed—By using his head, a person can save his feet, his posture, his disposition, and maybe even his general health.

Foot troubles are unnecessary, but many people have them—usually because they “abuse their feet unmercifully.” Some tips on foot care are listed in the March Today's Health, published by the American Medical Association.

Heels on shoes are a major source of foot trouble, the article said. One New York orthopedist has observed that a woman's foot troubles begin when she starts buying shoes in the woman's department.

The article recommended that heels be no higher than one and one-half inches; that shoes have plenty of toe space to prevent cramping, and that they fit snugly to give support.

Shoes should be purchased late in the afternoon, since feet swell during the day and are slightly larger at that time. Shoes should never be bought by size; the feet should always be measured.

Extreme care should be taken in buying shoes for children. Hand-me-down shoes should be avoided since they never fit properly. Children's feet grow at “an astonishing rate,” the article noted. On the average a child will outgrow a pair of shoes in three months. The shoe should be three-fourths of an inch longer than the longest toe. Leather shoes are best, but canvas shoes are all right for playing, provided they are not worn constantly, the article said.

The article also said:

—Corns are simply masses of dead skin cells with a sensitive core, caused by excessive rubbing. Cutting corns is not advisable and neither is the use of drug store corn removers. The safest home treatment is a simple non-medicated moleskin plaster, which will lessen pressure and pain. A well-fitting shoe, however, is the best corn remover.

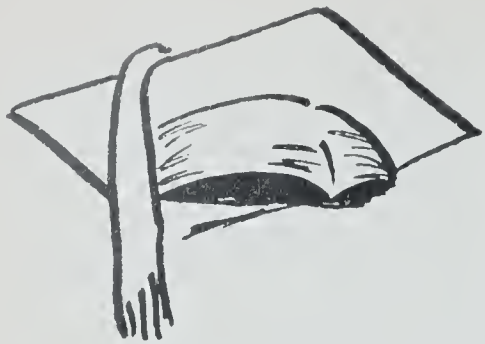
—Bunions result when toes are cramped and the ends of the bones next to the toes thicken causing heavy calluses to form. At times, the condition becomes serious enough to require surgery. A long course of exercises may restore normal function.

—Ingrown toenails occur when the toes are cramped and the nails are improperly cut. They should be cut straight across.

—Athlete's foot is usually a minor nuisance. If it occurs, the feet should be washed daily and dried thoroughly. It is vitally important to keep the feet dry. Boric acid foot powders help, and so does ordinary talcum.

—Some footaches can be traced to poor circulation. Propping the feet up on a desk or table from time to time will help relieve the pain.

“If your feet hurt, go to a specialist: an orthopedist who is medically trained. If your foot ailments are minor, temporary relief may be provided by a chiropodist or podiatrist,” the article said.



MEDICAL CENTER NEWS

GOVERNOR PATTERSON, UNIVERSITY TRUSTEES TOUR CENTER, HEAR FUTURE PLANS

The University of Alabama Board of Trustees, along with Governor John Patterson and State Education Superintendent Frank R. Stewart, heard Medical Center authorities on February 14 call for a substantial increase from state funds to meet "tremendous health needs of the state."

The Trustees and Governor Patterson, who by virtue of office is a member of the Board, toured facilities of the Medical Center, after which they met with Medical Center officials for an afternoon session.

Dr. Robert C. Berson, Vice President for Health Affairs of the University, presented a summary of what he termed the "broad aspects of the health needs of our state," and recommended a number of positive steps which he said would go a long way toward meeting these needs.

He called for an expenditure of \$2,500,000 for the conversion of large areas of the hospital now "hopelessly antiquated and run down" to an efficient, modern general "hospital of last resort," in which all facilities for the most advanced study and treatment can be brought to bear on the problems of health and medical needs.

The University asked also for \$1,250,000 for operating funds and \$750,000 from the Educational Trust Fund, because of the need for expanding the educational program for registered nurses, practical nurses, technicians, interns and residents.

Dr. Berson called attention to the outstanding progress of the Dental School, saying that it represented without question one of the very finest dental schools in the nation. "But there is a critical need for its expansion," he said. His report called for \$984,396 for the operation of the School of Dentistry and \$600,000 in capital funds for the addition of two floors to the Dental Clinic.

The Medical College, established on a four-year basis 14 years ago, has made sound progress in this time, despite tremendous handicaps of insufficient and unsuitable space and the hospital problems. He requested \$1,698,000 for the operation of the Medical College.

In citing the unmet needs, Dr. Berson called attention to the most critical condition of the indigent patient program of the University Hospital

and Hillman Clinic. "Our hospital is the 28th busiest in the nation," he said. He also explained that patients are admitted, both private and indigent, from every county in the state, as well as from other parts of the South and the nation.

"If a solution can be found," Dr. Berson concluded, "for the two crucial problems of providing economic stability for the University Hospital, and for putting its physical plant in modern, efficient condition, and if the programs of the professional schools can be supported, a great and sound step forward will have been taken. It will require many years of consistent effort on the part of students, faculty and staff, but we can look forward to the time when the people of our state will have the services of an adequate number of dedicated, well-trained workers in the health fields to staff the combination of hospitals and clinics completed or under development throughout our state at a cost of \$75,000,000."

INGCO FOUNDATION GIVES MEDICAL GRANT

A donation of \$1,000 by the Ingco Foundation, Inc. to the University of Alabama Medical Center, Department of Ophthalmology, has been announced by officials of the Medical College of Alabama and University Hospital and Hillman Clinic.

The money is to be used in investigative work into eye diseases dealing with both cause and treatment.

PSYCHIATRIC UNIT REMODELED

Open house was held from 2:00 to 5:00 p. m. Sunday, January 25, at the recently remodeled and expanded psychiatric unit of the University Hospital.

The University Hospital is the only general hospital in this area which offers psychiatric care, and its facilities had long been inadequate to meet demands.

The number of beds in this private, in-patient facility was increased from 18 to 33. The expansion also included much-needed office space, a conference room, a treatment room, and a spacious day room where patients may go to read, watch television and play games. The modern nursing station is designed in such a way that nurses can easily keep watch on all corridors.

COUNTY HEALTH FAIR SLATED FOR MAY 15-17

An exciting look at important research work . . . free screening tests . . . scores of exhibits on progress in various fields of health . . . valuable free booklets on health.

These will be only part of a gigantic Jefferson County Health Fair in the Municipal Auditorium here May 15, 16, and 17.

More than 30 public and voluntary health agencies have joined forces to present exhibits, displays and demonstrations on progress in the fight for better health, in the color and excitement of a fair background. There will be no admission charge.

A section of the fair also will be devoted to the role of business organizations in community health and well-being.

The Atomic Energy Commission at Oak Ridge, Tennessee, and the American Medical Association are among national organizations which have offered major exhibits for the fair, Rutherford N. Yeates, exhibits chairman said.

Mr. Yeates estimated that around 100,000 persons from Jefferson and other counties will come to the health fair. The fair will be opened with ceremonies at 2:00 p. m. on Friday, May 15, and the fair will be open until 9:00 p. m. that night. It will be open until 9:00 p. m. on Saturday and from 1:00 p. m. to 6:00 p. m. on Sunday.

One of the main goals of the health fair, according to Dr. Richard T. Eastwood, general chairman, is to show young men and women the opportunities for careers in various health fields.

"Already, many demands cannot be met. The problem will become increasingly acute if we do not begin now to attract young people to these professions," he said.

As a feature of the fair, students and their parents will have a chance to talk with doctors, dentists, nurses, druggists, technicians and educators on careers in the various health services.

One of the largest attractions will be a series of exhibits by members of the Birmingham Hospital Council, giving a behind-the-scenes look at hospitals in action.

DENTAL SCHOOL IS LAUDED

Birmingham's University of Alabama School of Dentistry is one of the finest dental institutions in the nation, according to Dr. Walter T. McFall, orthodontist from Asheville, North Carolina.

Dr. McFall spoke before the Birmingham District Dental Society on February 17.

"As I travel across the U. S.," said Dr. McFall, "I find that the work of the University of Ala-

bama School of Dentistry is known in almost every one of the 49 states, and takes a back seat to none."

He revealed that North Carolina's dental school spends twice as much in state appropriations for students training as the University.

"The state of Alabama must meet the challenge of increased population by increasing the appropriations for dental students," he said.

Dr. McFall spoke also of the modern methods used in dentistry for children, to give finer service and eliminate children's fears.

SEMINAR ON STAPHYLOCOCCAL INFECTIONS HELD

The University Hospital School of Medical Technology presented a statewide seminar on staphylococcal infections from the viewpoint of the laboratory on March 21, 1959. The seminar was primarily for clinical pathologists and medical technologists from around the state. Among the speakers were: Dr. Morris Tager, from Emory University, who spoke on staphylococcal enzyme systems and their significance; Dr. Elaine Updyke, Chief of the Staphylococcus and Streptococcus Unit of the Communicable Disease Center, who spoke on bacteriophage typing of staphylococci; Dr. Wallace Brockman of the Southern Research Institute, who spoke on mechanisms of development of resistance to antibiotics by staphylococci.

WORK TO BEGIN JUNE 1 ON CHILDREN'S HOSPITAL

Construction is to begin on the Children's Hospital about June 1.

Plans for the new hospital to be located in the Medical Center area include a three-story hospital building with some 130 beds, an outpatient clinic with 16 examining rooms, and a nurses school and home.

The building site for the new hospital in the Center is between Sixth and Seventh Avenue, S. and between 16th and 17th Streets.

Total cost of the project is estimated at \$2.8 million.

SIR JOHN ECCLES LECTURES AT CENTER

Sir John Eccles, distinguished neurophysiologist, conducted a series of lectures and discussions on neurophysiology at the University of Alabama Medical Center on March 2 and 3.

Sponsored by the Squibb Centennial Lecture Committee, Sir John is one of five eminent lecturers touring a number of medical schools under the auspices of this organization.

Dr. Eccles is Professor of Physiology at the John Curtin School of Medical Research, Australian

National University, Canberra, Australia. Educated in Australia and at Oxford, Dr. Eccles was a Rhodes Scholar in 1925 and a Christopher Welch Scholar in 1927. He spent several years at Exeter College as a Junior Research Fellow and a Staines Medical Fellow, following which he was a Fellow and Tutor of Magdalen College and University Lecturer in Physiology. Later, Dr. Eccles was Professor of Physiology at the University of Otago, Dunedin, New Zealand, and since that time has been at the Australian National University. He was knighted by Queen Elizabeth in 1958.

Dr. Eccles made a tour of the Medical Center on March 2. That evening, he addressed the general meeting of Sigma Chi, with the faculty and the student body being invited.

He visited the individual departments in the Basic Science Building the following day, and addressed a seminar in the departments of physiology, biochemistry and pharmacology. He spoke at a joint meeting of the Alabama Academy of Neurology and Psychiatry and the Birmingham Society of Internists that night.

MORE TOOTH CAVITIES FOUND AMONG SMOKERS

People who smoke generally have more dental cavities than non-smokers, according to a recent survey conducted by Dr. Stanley E. Keller of the University of Alabama School of Dentistry.

The two-year survey, conducted among students of American International College at Springfield, Massachusetts, was not conclusive, but Dr. Keller says that it does verify findings of a similar study conducted among young draftees in World War II.

"I found that in a year's time smokers will have, on the average, one more cavity than non-smokers," said Dr. Keller. However, he added that he considers smoking a minor factor, over-all, in causes of dental decay, and that it was impossible to correlate the amount of smoking with the degree of decay.

DR. FINN ADDRESSES GUILD

"Dental aspects of mental retardation" was the topic presented to members of the Service Guild of Birmingham by Dr. Sidney B. Finn, professor at the University of Alabama School of Dentistry at a meeting of that organization which took place on February 16.

Dr. Finn is consultant of the children's dental clinic at the Children's Hospital, director of the dental clinic at the Alabama State School for the Deaf and Blind, consultant at Tuskegee Veteran's Administration Hospital, and director of the dental clinic at the Crippled Children's Hospital. Dr. Finn is nationally known for his research in children's dentistry.

The Service Guild of Birmingham is continuing studies of the retarded child in added preparation for the work which members do at Opportunity Center, major project of the Guild.

DR. LITTLE APPOINTED TO MEDICAL CENTER POST

Dr. Samuel C. Little has been appointed Professor of Neurology and Executive Officer of the Division of Neurology of the department of medicine at the Medical College of Alabama.

The announcement was made by Dr. Robert C. Berson, Vice President for Health Affairs of the University of Alabama, and became effective February 15. Dr. Little has served successively as Assistant Professor of Neurology, Associate Professor of Neurology, and Clinical Professor of Neurology at the Medical College.

He is certified in Neurology by the American Board of Psychiatry and Neurology, and in Clinical Electroencephalography by the Board of Qualification of the American EEG Society. He is a past president of the Southern EEG Society.

Dr. Wilmot S. Littlejohn is chairman of the Division of Neurology in the Department of Medicine.

DR. REYNOLDS IS ELECTED RADIOLOGY COLLEGE PRESIDENT

Dr. Lawrence Reynolds of Detroit, Michigan, for whom the Reynolds Library at the Medical Center of Alabama was named, was elected president of the American College of Radiology at that organization's annual meeting in Chicago.

The American College of Radiology is a national medical association representing physicians who specialize in use of x-rays, radium and other radioactive substances in diagnosis and treatment of disease.

Dr. Reynolds is a native of Ozark, Alabama, and he, his father and brothers were all graduates of the old University of Alabama Medical School in Mobile. He is now chairman of the Department of Radiology at Harper Hospital in Detroit, is on the staff of Wayne University, and is editor of The American Journal of Roentgenology, Radium Therapy and Nuclear Medicine.

STAFF ACTIVITIES

Dr. S. B. Barker, Professor of Pharmacology, attended the meetings of the Senior Research Fellowship Committee in Washington, D. C., February 27 and 28.

Drs. Ray O. Noojin, Lamar S. Osment, D. Bluford Stough, A. D. Wright, James D. Holliman, and Donald R. Montgomery attended the meeting of the Louisiana Dermatologic Society in New Or-

leans, February 28 through March 1.

Among those in attendance at the Southern Regional Meeting of the Medical Library Association in Galveston, Texas, in February, were Mrs. Sarah C. Brown, Mrs. Eleanor Lanier, and Mrs. Hilda Harris.

Mrs. Hazel Jones, past president of the University Hospital Auxiliary, has been named chairman of the Committee on Hospital Auxiliaries of the Alabama Hospital Association.

Matthew F. McNulty, Jr., administrator of the University Hospital and Hillman Clinic, is the recipient of two well-deserved honors of late. He is the newly-elected president of the Board of Directors of the Visiting Nurses Association for Jefferson County, and he has been appointed to the Board of Examiners of the American College of Hospital Administrators. The functions of this board are to evaluate the written examinations and to preside at the oral examinations conducted for candidates seeking entrance as nominees and members of the American College of Hospital Administrators.

Mr. McNulty also participated recently in a national meeting of hospital administrators held at the Hotel Sherman in Chicago February 5 through 7. Here he served as a group leader at a special management seminar, one of the features of this congress that attracted administrators from all over the country.

Mrs. Polly Anne Flippen has been appointed instructor in medical nursing at the University Hospital School of Nursing. A native of Russellville, Alabama, she received her B. S. N. from Vanderbilt School of Nursing, and worked for one year as a Public Health Nurse in Jefferson County before joining the faculty here. Her husband, Joe, is a sophomore medical student, and they have a two-month-old son.

Dr. Robert Roach, Director of the Hearing and Speech Clinic, has recently been appointed as an abstractor for *Excerpta Medica*, the International Medical Abstracting Service. In this new capacity, Dr. Roach will abstract in the fields of audiology and the educational implications of a hearing loss.

Dr. Roach will give a talk on "The Hard-of-Hearing Child in the Classroom" at the meeting of the Tennessee Speech and Hearing Association on March 19.

Dr. Don Olson, director of speech pathology at the Hearing and Speech Clinic, has just been accepted as a member of the American Association for Cleft Palate Rehabilitation. He is one of only two members in this state.

Dr. Olson will address the senior class in speech correction at Alabama College in March. He will inform the students of the facilities offered in the Birmingham Speech and Hearing program.

Prolonged Use of Tranquilizer Does Not Cause Side Effects—The tranquilizer chlorpromazine can be given to psychiatric patients for prolonged periods in large doses without harmful side effects, a new study has shown.

Shortly after the introduction of chlorpromazine (Thorazine) several years ago, it was realized that the drug could cause damage to the liver, blood, and kidneys, and that some patients would require it indefinitely.

A study of 50 patients who took large quantities of the drug for two to four years has shown that none developed side effects, even though their total dosages ranged from 54,000 milligrams to more than a million milligrams.

"The dosage was large enough that it is reasonable to assume that any deleterious effects should be detectable," according to Dr. Frank J. Ayd, Jr., chief of psychiatry at Franklin Square Hospital, Baltimore, who conducted the study.

Dr. Ayd reported the study in the March 21 Journal of the American Medical Association.

The study group consisted of 31 women and 19 men, aged 12 to 70 years. Prior to taking chlorpromazine they had been seriously ill from one to 20 years and had not responded to the usual psychiatric treatments. At the beginning of treatment, 13 were hospitalized and 32 were at home. All were totally incapacitated and none had a good outlook for recovery.

None of the patients have recovered from their basic illness, although all have shown improvement in their symptoms. The 18 originally hospitalized patients are now at home; four are working and seven have resumed responsibility for their household duties. Of the 32 unhospitalized patients, 11 have returned to work and 14 are helping with household work.

"It is certain," Dr. Ayd said, "that without chlorpromazine therapy most of these patients would have gradually deteriorated and would now be hospitalized. Instead, chlorpromazine therapy has enabled them to remain outside of a hospital, to work, and to be reasonably comfortable in spite of the persistence of their basic illness."

None of them suffered any serious side effects. Three became sensitive to light, and two-fifths of the women developed menstrual irregularities that eventually cleared. All the patients gained weight during the first year of treatment.

A. M. A. Names Permanent Committee on Hypnosis—A Committee on Medical Use of Hypnosis has been appointed by the American Medical Association, with Dr. Harold Rosen, Baltimore, as chairman.

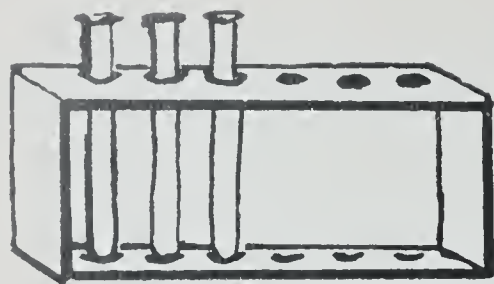
Other members are Dr. Zigmond M. Lebensohn, Washington, D. C., and Dr. Louis J. West, Oklahoma City. All three are psychiatrists.

The committee is part of the A. M. A.'s Council on Mental Health, which last summer prepared a report on the medical use of hypnosis. The report, adopted by the A. M. A.'s House of Delegates, said hypnosis may be regarded as a valuable therapeutic adjunct in certain medical situations.

The committee will hold its organizational meeting sometime this spring. At that time, it will decide on the precise areas it will study.

Dr. Rosen, in an interview reported in the March 23 AMA News, said hypnosis should be introduced into a medical school course whenever its use as a sedative, analgesic or anaesthetic may be of value. Thus, the use of hypnotism might be taught as part of instructions in obstetrics, orthopedic surgery or burn treatment.

He emphasized that a background in psychodynamics is essential for physicians who wish to use hypnosis.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

HEART DISEASE CONTROL

Steadily rising morbidity and mortality rates of heart disease in Alabama have been a source of major concern to the Health Department for a number of years. Even before the Division of Heart Disease Control was established, the department had conducted a heart disease case-finding program in conjunction with the tuberculosis control program. The Division of Heart Disease Control was established in the late summer of 1949. Organization of the Division was made possible when federal funds for heart disease work were made available on a matching basis.

After the establishment of the division, the case-finding program was continued and strengthened and other services were added. In the case-finding program, all x-rays made in mass surveys are read for heart disease as well as for tuberculosis and other lung pathology. Persons whose x-rays are suggestive of heart disease are asked to return for a 14 x 17 retake. If the retake also indicates heart disease, the person is asked to go to his private physician for explanation of the x-ray findings and further study and treatment as necessary. His physician is informed of the x-ray findings and the fact that the patient has been asked to call on him. (Treatment and/or rehabilitation of heart disease patients is not a part of the health department program.) Of 77,534 persons x-rayed during mass surveys in 1957, 743 were recalled for retakes because of suspected heart disease. On recheck, 224 of this number proved to have definite heart disease while 51 remained suspicious on retake.

Since its establishment, the Division of Heart Disease Control has joined with the University Hospital and the Alabama Heart Association in the operation of a cardiac diagnostic clinic for the medically indigent. This clinic is located at the University Hospital in Birmingham. There are separate clinic sessions for adult and pediatric patients. Medically indigent persons from anywhere in Alabama are eligible to attend the clinic. There is no requirement that persons sent to the clinic must be referred through the Health Department, but referrals must be made by physicians, and no person should report to the clinic without a definite appointment. Six hundred fifteen patients were seen in the clinic during 1957. Well

over two-thirds of these patients lived outside of Jefferson County.

In the preventive phase of its program the Division of Heart Disease Control furnishes antibiotics to the medically indigent for prophylaxis of rheumatic fever in counties where such a program has been approved by the Board of Censors. A patient who receives such antibiotics is certified to the appropriate county health department by his private physician.

The most recent program of the Division of Heart Disease Control is also concerned with rheumatic fever and rheumatic heart disease. Because it is known that rheumatic fever follows repeated beta-hemolytic streptococcus infections, it has become important to determine how prevalent such infections are in this region. A pilot project designed to acquire such information is now in operation in four counties. All private physicians in these counties are cooperating in the program.

Each physician takes two swabs from the throat of every patient who has a sore throat. (Swabs, in tubes, are furnished to the physicians by the Health Department.) He sends the swabs to the local health department. The public health nurse streaks a blood plate with one swab and incubates it over night. The nurse examines the plate the next morning and reports the findings to the physician. Nurses participating in this program were given the necessary training at the Public Health Laboratory in Montgomery. In one city where there is no health unit, the laboratory technician at the hospital volunteered to perform this service.

This project has three objectives. The first, as already mentioned, is to determine how prevalent streptococcus infections, sometimes considered to be a real problem only in colder climates, actually are in Alabama. It is, of course, too early to draw any conclusions in this regard since the program has been in operation only two months. A surprisingly high percentage of the cultures thus far have proved to be streptococcus.

A second objective of the program has been to furnish the physicians with a rapid means of diagnosing streptococcus infections. The third objective has been to determine if the streptococcus can withstand drying. This is the reason for the second swab which the physician takes. It has already been shown that the organisms do withstand drying, and, in fact, appear to grow purer cultures after drying. This characteristic would be of great

significance in the event the prevalence study makes it appear desirable to offer this service to all physicians in Alabama—specimens could be sent through the mail. Such a service would be possible only in the event additional funds and laboratory personnel became available.

This latest project has been made possible by the temporary assignment to the staff of a heart disease consultant by the U. S. Public Health Service. It is anticipated that other programs will be developed during his tenure here. The Division of Heart Disease Control is a part of the Bureau of Preventable Diseases. For several years now, staff vacancies have meant that the director of the Bureau has had to give personal direction to all of the major programs in this bureau. It has been impossible for him to undertake the time-consuming development of new programs. If programs can be developed and put on a sound basis while the consultant is assigned here, it may be possible to continue them after he leaves since they would probably not require the same close supervision necessary during the developmental stages of any new program.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

February 1959

Examinations for diphtheria bacilli and Vincent's	54
Agglutination tests	500
Typhoid cultures (blood, feces and urine)	519
Brucella cultures	1
Examinations for malaria	15
Examinations for intestinal parasites	3,505
Darkfield examinations	5
Serologic tests for syphilis (blood and spinal fluid)	23,625
Examinations for gonococci	1,595
Examinations for tubercle bacilli	3,505
Examinations for Negri bodies (smears and animal inoculations)	232
Water examinations	1,752
Milk and dairy products examinations	4,453
Miscellaneous examinations	588
Total	40,349

Dothan Branch Laboratory report not received in time to be included in the February report.

For every known case of tuberculosis, there is one unknown tuberculous person, according to the publication *Patterns of Disease*, prepared by Parke, Davis and Company for the medical profession. Total number of known and unknown cases (both active and inactive TB) in the U. S. is now estimated at 800,000.

The publication underscores the need for more intensive drives to detect the disease. For the past five years, it reports, the per cent of cases discovered in different stages of tuberculosis has remained approximately constant, with only about 22 per cent of newly reported active and probably active cases in the early stage. Yet to "eradicate tuberculosis the disease must be detected and treated early, while lesions are small and readily amenable to therapy."

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS

1959

	Jan.	Feb.	E.E.* Feb.
Typhoid and paratyphoid	2	2	3
Undulant fever	0	0	0
Meningitis	8	10	17
Scarlet fever	114	99	60
Whooping cough	9	28	44
Diphtheria	6	1	11
Tetanus	3	1	1
Tuberculosis	142	186	169
Tularemia	2	1	1
Amebic dysentery	1	1	2
Malaria	0	0	0
Influenza	125	127	3025
Smallpox	0	0	0
Measles	297	837	412
Poliomyelitis	1	1	5
Encephalitis	2	1	0
Chickenpox	155	191	350
Typhus fever	0	0	0
Mumps	63	99	219
Cancer	363	396	389
Pellagra	1	0	0
Pneumonia	282	270	364
Syphilis	124	89	167
Chancroid	3	2	5
Gonorrhea	352	217	319
Rabies—Human cases	0	0	0
Positive animal heads	27	26	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS AND COMPARATIVE DATA, DECEMBER 1958

Live Births, Deaths, Fetal Deaths, Infant Deaths, and Causes of Death	Number Registered During December 1958			Rates* (Annual Basis)		
	Total	White	Non-White	1958	1957	1956
Live births	7053	4371	2682	26.0	27.1	27.2
Deaths	2667	1630	1037	9.8	10.2	9.4
Fetal deaths	165	71	94	22.9	19.5	20.6
Infant deaths—						
under one month	138	74	64	19.6	21.4	22.2
under one year	277	126	151	39.3	35.0	34.9
Cause of Death						
Tuberculosis, 001-019	18	9	9	6.6	9.3	10.5
Syphilis, 020-029	6	3	3	2.2	2.2	1.5
Dysentery, 045-048					0.4	0.4
Diphtheria, 055						
Whooping cough, 056					0.4	
Meningococcal infections, 057	1		1	0.4	0.7	0.4
Poliomyelitis, 080, 081	2	1	1	0.7		0.7
Measles, 085						
Malignant neoplasms, 140-205	323	211	112	119.1	110.3	116.2
Diabetes mellitus, 260	33	21	12	12.2	13.0	12.0
Pellagra, 281					0.7	0.4
Vascular lesions of central nervous system, 330-334	370	226	144	136.5	143.5	126.7
Rheumatic fever, 400-402	3	2	1	1.1	2.2	3.0
Diseases of the heart, 410-443	846	560	286	312.0	335.8	303.4
Hypertension with heart disease, 440-443	156	63	93	57.5	57.0	51.9
Diseases of the arteries, 450-456	61	40	21	22.5	23.8	16.8
Influenza, 480-483	14	3	11	5.2	17.9	6.0
Pneumonia, all forms, 490-493	114	67	47	42.0	36.5	38.5
Bronchitis, 500-502	3	2	1	1.1	2.6	1.9
Appendicitis, 550-553	2	2		0.7	1.9	1.5
Intestinal obstruction and hernia, 560, 561, 570	15	11	4	5.5	4.8	3.4
Gastro-enteritis and colitis, under 2, 571.0, 764	19	4	15	7.0	2.6	4.9
Cirrhosis of liver, 581	16	14	2	5.9	9.3	8.2
Diseases of pregnancy and childbirth, 640-689	7	2	5	9.7	5.4	5.4
Congenital malformations, 750-759	31	22	9	4.4	4.1	5.4
Immaturity at birth, 774-776	38	15	23	5.4	6.0	6.3
Accidents, total, 800-962	199	114	85	73.4	74.2	65.0
Motor vehicle accidents, 810-835, 960	88	62	26	32.5	32.4	26.9
All other defined causes	417	238	179	153.8	146.8	142.9
Ill-defined and unknown causes, 780-793, 795	129	63	66	47.6	52.5	44.1

Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

AMERICAN MEDICAL ASSOCIATION NEWS

VALUE OF SABIN'S POLIO VACCINE TO BE KNOWN THIS YEAR

The worth of attenuated, live poliovirus vaccine as a tool to fight poliomyelitis should be proved by the end of 1959, according to Dr. Albert B. Sabin, Cincinnati virologist.

By the end of the year data will be accumulated from field trials on approximately one million persons.

"There is no indication so far that there is any danger either to those who receive the vaccine or to those who may pick up the virus from vaccinated individuals," he said in an interview reported in the March AMA News, published by the American Medical Association.

Dr. Sabin's vaccine contains live polio viruses which have been "tamed," or reduced in strength.

The decision that ultimately will have to be reached is whether to continue to attempt to vaccinate a whole population by giving an as yet undetermined number of shots of inactivated virus (Salk) vaccine or to give the three types of attenuated live virus vaccine, which can be taken orally and may be expected to produce long-lasting immunity, Dr. Sabin declared.

Since 1957 he has been testing the vaccine under procedures recommended by the Expert Committee on Poliomyelitis of the World Health Organization. It has been used in Russia, Czechoslovakia, Mexico, Singapore, the Netherlands, Chile, Sweden, England and Japan.

The vaccine is given orally, two drops to a teaspoonful of syrup. The vaccine for the three types of poliovirus are given at four-week intervals.

Dr. Sabin noted that his vaccine—as opposed to the "killed" virus vaccine—produces a complete or partial resistance to subsequent multiplication of polioviruses within the intestine. He believes that his vaccine could be used to supplement the partial immunity produced by Salk vaccine.

Dr. Sabin is professor of research pediatrics at the University of Cincinnati College of Medicine.

ORAL TREATMENT FOR RINGWORM REPORTED

An antibiotic, which can be taken by mouth, has been found to be effective in the treatment of ringworm, according to two Florida dermatologists.

In a preliminary report in the March Archives of Dermatology, published by the American Medical Association, the doctors said they treated 31 patients with various types of ringworm with griseofulvin.

The drug is called griseofulvin for the species of *Penicillium* from which it is made. Penicillin is made from another species—notatum. Griseofulvin earlier was found effective against fungus infections in plants.

When griseofulvin was taken daily by mouth, ringworm of the body and scalp cleared within one to three weeks. Onychomycosis cleared within three to four months, they said.

This success suggests that "the systemic treatment of superficial fungus infections in man at last seems a near reality," the doctors said. There has been no standard treatment for fungus infections, but it has usually included keeping the area dry, and applying various chemicals.

Adverse side effects from griseofulvin appear to be minimal in man, they said. However, animal experiments indicate that griseofulvin affects the blood and the doctors recommended that regular blood cell counts be made during prolonged use of the drug in humans.

The duration of treatment required for the various fungi varies, apparently depending on the time required for normal replacement of the infected tissues.

In conclusion, the doctors said that fungus infections of various origin showed "a uniformly favorable response to oral therapy with griseofulvin." Even infections of 60 years duration responded. However, the chances of relapse or recurrence are still not known.

Drs. Harvey Blank and Frank J. Roth of the University of Miami School of Medicine, Miami, Fla., and the Veterans Administration Hospital, Coral Gables, Fla., were the authors.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

May 1959

No. 11

NOCARDIA ASTEROIDES EFFECTIVELY TREATED WITH CONCURRENT STEROID MANAGEMENT OF PEMPHIGUS VULGARIS

SAMUEL EICHOLD, M. D.

and

R. DENNY WRIGHT, M. D.

Mobile, Alabama

This report concerns the successful management of a single case of pemphigus vulgaris with intercurrent pulmonary *Nocardia asteroides* infection. Steroid therapy in excess of 1000 mg. per twenty-four hours was utilized to induce a remission of the pemphigus. With the induction of a response of the cutaneous lesions, a typical Cushing's syndrome was manifest. The intercurrent pulmonary disease became evident in the 14th month of the primary disease.

Studies of other organ systems prior to the diagnosis of pemphigus and during the management with steroids revealed no abnormalities in the gastrointestinal, the cardiovascular, or the osseous systems.

The criteria for the diagnosis of pemphigus included positive Tzanck tests, the histopathology of the lesions, plus a classical clinical picture. The Tzanck test consists of scrapings from the blister base smeared on the slide, air dried or fixed in alcohol, and stained with hematoxylin and eosin. The microscopic appearance of the lesions revealed epithelial cells with loss of intercellular bridges with perinuclear rarefaction and rounding of contours.

In the management of *Nocardia asteroides* cavitations in the lung of a patient requiring continued steroid therapy in large doses to control pemphigus, there was a unique situation which was apparently without precedent in the medical literature.

A forty-one-year-old physician initially noted desquamation of the gingiva that failed to respond to conventional topical treatment. Cultures and biopsy of tissue did not result in a specific diagnosis or a satisfactory therapeutic regimen. Seven

months later flaccid bullae appeared on the chest, back, and face that were diagnostic clinically, histologically, and cytologically of pemphigus vulgaris. The general review of organ systems at this time revealed no other organic or infectious process.

Therapy with ACTH to a maximum dosage of 120 units a day produced no alteration in the existing pemphigus lesions and several new bullae appeared during this regimen. Concurrent therapy with hydrocortisone in progressively increasing dosage to 800 mg. and then omission of ACTH was ineffective. Therapy was then changed to hydrocortisone alone and carried to a level of twelve hundred milligrams per twenty-four hours, until a remission was induced as evidenced by healing of old lesions and absence of new bullae.

The favorable response of the cutaneous lesions was accompanied by typical Cushing's disease and a mild psychosis, transient, and recurrent. Concurrently, a cough developed that was productive of sanguineous material. A chest x-ray revealed cavitation in two lobes of the right lung, with surrounding areas of pneumonitis. A film taken eight weeks earlier had revealed no active lung disease.

The patient was hospitalized for detailed laboratory studies that preceded specific therapy for this third disease. Culture of material from the lung revealed *Nocardia asteroides*. In the treatment of *Nocardia*, a blood level of fifteen milligrams per cent of sulfa was sustained. To reach this level both sulfadiazine and sulfamerazine were given in aggregate doses of twelve grams per day. The therapeutic regimen necessitated over one hundred pills in a twenty-four hour period, plus supplementary insulin to effect normoglycemia.

Throughout the two months of hospitalization careful electrolyte balance was maintained. An unfortunate period of anorexia, with nausea and vomiting during a psychotic episode, preceded a state of anuria. This necessitated the omission of sulfa. Hydration was judiciously maintained before return of urine output in the next twenty-six hours. Anuria had occurred despite the maintenance of an alkaline urine. The patient's disturbed psychic status had markedly reduced fluid intake and dehydration occurred with the vomiting.

Hydrocortisone dosage was not reduced until the cutaneous lesions epithelialized, and then dosage was very slowly lowered by approximately ten per cent every two weeks. The resolution of the parenchymal lesions in the lungs in the initial two weeks was dramatic. This demonstrated the sensitivity of the isolated fungi, even before sensitivity studies were reported. In the brief period of only six months the x-rays revealed not only the absence of cavitation but a clearing of the infiltration in both lobes.

Since return to full activity seven months after the pulmonary lesions were observed, there has been no subjective or objective symptomatology of the original pemphigus, the induced Cushing's disease, or the fungus infection of the lungs. Insulin became unnecessary when hydrocortisone dosage was reduced to one hundred and sixty milligrams per twenty-four hours. Though omission

of hydrocortisone might be possible, therapy has been continued at a level of twenty milligrams per twenty-four hours. The patient also receives Aralen, 5 mg. twice a day, on an empirical basis and sulfadiazine and sulfamerazine in dosage of $\frac{1}{2}$ gram every eight hours.

Grateful acknowledgement is due to Drs. Leslie K. Mundt and Albert Segaloff, both of New Orleans, without whose help this case study would have been impossible.

1555 Springhill Avenue.

BIBLIOGRAPHY

1. Aquilina, J. T.; Townsend, J. R.; Imburgia, R.; Greenstein, S. A., and Wuertz, R. L.: Corticotropin (ACTH) and Cortisone in Treatment of Pemphigus Vulgaris, *A. M. A. Arch. Dermat. & Syph.* 67: 166-172, Feb. 1953.
2. Bloom, D.: Pemphigus Vulgaris Complicated by Diabetes, Treated With Corticotropin and Cortisone, *A. M. A. Arch. Dermat. & Syph.* 68: 347, Sept. 1953 (in *Soc. Prac.*).
3. Reznick, L.; Lever, W. F., and Frazier, C. A.: Treatment of Pemphigus With ACTH, Cortisone and Prednisone: Results Obtained in Twenty-Five Cases Over a Period of Five Years, *New England J. Med.* 255: 305-315, August 16, 1956.
4. Robinson, H. M., Jr.: Prednisone in Treatment of Selected Dermatoses, *J. A. M. A.* 158: 473-475, June 11, 1955.
5. Stroughton, R. B.: Long-Term Management of Pemphigus Vulgaris With Corticotropin (ACTH), *J. A. M. A.* 160: 1011-1014, March 24, 1956.

THE DIAGNOSIS AND MANAGEMENT OF THE ADNEXAL MASS

MICHAEL NEWTON, M. D.

Jackson, Mississippi

Gynecologists commonly discuss the diagnosis and management of specific pelvic diseases such as uterine myomata or ovarian carcinoma. However, when the patient is first seen, these conditions do not appear in such a definite and diagnosed form, and the problem of diagnosis commonly arises only when a mass is felt in the lateral part of the pelvis on vaginal or rectal examination. The history may be scanty and the associated findings few, so that the various causes for the mass have to be considered together. Furthermore, this situation occurs in the practice of everyone who deals with female patients whether he be general practitioner, surgeon or gynecologist. Therefore, it is appropriate to consider the adnexal mass as a

separate entity and to review the likely causes, the means of diagnosis from history, examination and other procedures, and the possible methods of treatment.

There are a number of conditions which may give rise to an adnexal mass. Some of these are:

1. Ovarian—cysts or tumors.
2. Tubovarian—abscesses or cysts.
3. Tubal—hydrosalpinx, pyosalpinx, ectopic pregnancy.
4. Uterine—myomata.
5. Extragenital—carcinoma or diverticulitis of the colon, appendicitis, pelvic kidney, retroperitoneal tumor.

It is important to be able to differentiate as far as possible between these conditions. Even when the mass is discovered on routine examination, much help may be obtained from using all the

From the Department of Obstetrics and Gynecology, University of Mississippi School of Medicine.

Read before the Alabama Section of the United States Section of the International College of Surgeons, Mobile, October 4, 1958.

accepted techniques of history taking and physical examination.

Important points in the history—some of which, to our chagrin, may have to be obtained retrospectively, are as follows:

1. Age,
2. General symptoms,
3. Symptoms of pregnancy,
4. Abdominal pain,
5. Intestinal symptoms,
6. Urinary tract symptoms, and
7. Menstrual disturbances.

In a 25-year-old woman, benign ovarian cysts, pelvic inflammatory disease, endometriosis or complications of pregnancy are likely to be of first importance. In a 45-year-old woman, subserous, pedunculated or intraligamentary myomata are common; ovarian cysts are more likely to be malignant; endometriosis and pelvic inflammatory disease are somewhat less likely. In a 65-year-old woman, a malignant ovarian tumor, either cystic or solid, should receive first consideration.

General symptoms may be of some assistance. Weight loss, weakness and malaise may indicate a far advanced malignant lesion. Fever may suggest pelvic inflammatory disease or an accident occurring in an ovarian cyst or pedunculated myoma.

Symptoms of pregnancy, such as breast changes, frequency of urination, nausea or tiredness, may be present when the adnexal mass is an ectopic pregnancy. However, they may not always occur.

Abdominal pain is probably the most frequent symptom which calls the physician's attention to the presence or possible nature of an adnexal mass. Previous attacks of pain and fever, commonly occurring after menstruation, may indicate pelvic inflammatory disease. Pain spreading from the lower abdomen and becoming generalized (with perhaps pain in the shoulder) suggests rupture of a pelvic abscess or ectopic pregnancy. Pain continuing and becoming more severe suggests torsion or hemorrhage into a cyst.

Intestinal symptoms are frequently helpful. Change in bowel habit may call attention to the possibility of a colon lesion. Nausea and vomiting may occasionally suggest an intestinal rather than a pelvic disorder.

Urinary tract symptoms are commonly due to enlargement of the uterus itself, as by a myoma. Occasionally an adnexal mass may displace the uterus and give rise to bladder symptoms. Rarely, ureteral obstruction may occur from an adnexal mass.

Menstrual disturbances are quite commonly associated with adnexal masses. They indicate changes in the endometrium and therefore usually

follow changes in ovarian function. Examples of these are ectopic pregnancy, pelvic inflammatory disease, polycystic disease of the ovaries, or functioning ovarian tumors. In the older woman, postmenopausal bleeding in association with an adnexal mass should make one highly suspicious of a functioning ovarian tumor.

General examination of the patient may give clues to the nature of an adnexal mass. For example, in ovarian carcinoma metastases may occur early to the inguinal nodes. Palpation and biopsy of a hard superficial inguinal node may sometimes give an unexpected lead to the diagnosis. Also, pleural effusions are associated with certain ovarian tumors, as in Meig's syndrome, and detection of this fluid may be helpful. Evidence of masculinization may suggest ovarian dysfunction, as in the Stein-Levinthal syndrome or with a masculinizing ovarian tumor.

As part of the general examination of the patient, signs of pregnancy may be useful. For example, breast changes or blueness of the cervix or vagina may indicate that the adnexal mass may be an ectopic pregnancy. However, some confusion may occur if the patient is both pregnant and also has an adnexal mass.

Abdominal examination may be of help. The presence of a cystic or solid mass and its localization to one side or the other are important. Associated abdominal signs, such as tenderness, rebound tenderness or changes in peristaltic sounds, may be suggestive of inflammatory disease or an accident occurring in a cyst.

On pelvic examination, apart from the usual observations regarding external genitalia, vagina, cervix and uterus, the characteristics of the mass itself are most important. These may be listed as follows:

1. Position,
2. Consistency,
3. Shape,
4. Tenderness, and
5. Size.

Masses situated well lateral to the uterus, which cannot be separated from the lateral pelvic wall easily, are most likely to be ovarian in origin. When they are near the uterus, a tubal or uterine origin may be suspected. It is very helpful to determine whether the uterus is separable from the mass. In these instances the presence of a sound in the uterus is sometimes helpful, although one must be sure that the patient is not pregnant.

The consistency of an adnexal mass may be cystic, semi-solid or solid. A cystic mass is generally ovarian in origin. Solid adnexal masses are more likely to be myomata or solid ovarian tumors. A mass in which solid and cystic areas

can be palpated is suggestive of an ovarian tumor or possibly of inflammatory disease. On occasions a semi-solid consistency can be noted in an adnexal mass and this may be diagnostic of a dermoid cyst.

If the adnexal mass is sausage-shaped, this is suggestive of its tubal origin. A rounded mass is more likely to be an ovarian cyst. An irregular mass may indicate an ovarian tumor.

Tenderness in an adnexal mass suggests that it is inflammatory in nature or that perhaps an accident has occurred in a cyst. Marked tenderness is also noted in the classical tubal pregnancy.

The size of an adnexal mass is by no means diagnostic. However, the importance of estimating the size of a given mass cannot be over-emphasized. Where possible the unit of measurement should be centimeters (in diameter) rather than by the use of some more or less familiar vegetable or other object for comparison.

Although an accurate history, physical examination and pelvic examination are the primary aids in the differential diagnosis of an adnexal mass, certain additional diagnostic procedures may be of help. These are:

1. X-ray of abdomen,
2. Culdocentesis,
3. Culdoscopy, and
4. Intraperitoneal carbon dioxide.

A flat plate x-ray of the abdomen may be of great value. For instance, generalized calcification in a pelvic mass is suggestive of a myoma, whereas localized calcification occurs in 25 to 40% of all dermoid cysts.

Culdocentesis may be of considerable value in the diagnosis of a ruptured ectopic pregnancy or of a pelvic abscess. We perform this test routinely in all patients suspected of having a ruptured ectopic pregnancy. It can be done in the Out-patient Department using a 15 to 18 gauge needle. The withdrawal of non-clotting blood is presumptive evidence of bleeding into the peritoneal cavity. The withdrawal of pus indicates a pelvic abscess.

Culdoscopy is a procedure which is used extensively in some centers. We have had little experience with its use. It would seem to be particularly valuable in the diagnosis of adnexal masses in early pregnancy and in the study of sterility problems.

The intraperitoneal injection of carbon dioxide had been shown to be of particular value in the diagnosis of polycystic ovaries, as found in the Stein-Levinthal syndrome. However, its use is quite limited.

On rare occasions a hysterosalpingogram may

be of value in the diagnosis of an obscure adnexal mass.

When the adnexal mass is large or a definite diagnosis can be established from examination and studies, its management is fairly clear cut. Operation is generally indicated, if the patient's condition warrants it, and suitable operative treatment is performed for the condition found. For example, for ovarian carcinoma a bilateral salpingo-oophorectomy and total hysterectomy should be performed. The advisability of prophylactic removal of the omentum is under debate. In ectopic pregnancy, removal of the tube is clearly indicated, with conservation, if possible, of the associated ovary. Repair of the tube would appear to be of questionable value because of the danger of another ectopic pregnancy occurring at this site.

However, in spite of the above, the management of the smaller adnexal mass and of the mass whose nature is uncertain presents a very common and difficult problem. With this is associated the problem of management at operation when an unexpected adnexal mass is found or when the nature of the mass is uncertain.

The major difficulty confronting the surgeon is the fear of ovarian cancer. It is well known that patients with this disease have at best a 30% chance of surviving five years and that the best results are obtained if adequate operative treatment is performed before spread has occurred.

Three considerations should be foremost in the decision as to what to do about any given adnexal mass—size, symptoms, and age of patient.

An adnexal mass which is 6 cm. in diameter or more, whether it causes symptoms or not, should usually be removed surgically. As a general rule, too, a mass which is under 6 cm. in diameter may be observed for a period of time and if, at re-examination 4 to 6 weeks later, the mass shows an increase in size or persistence at a size of 5 to 6 cm., operation may be indicated.

If symptoms are definitely referable to the adnexal mass, this would incline one to operate on a mass of borderline size. It should be remembered, however, that lower abdominal pain cannot necessarily be attributed to a small ovarian cyst and that there are many other causes, particularly psychosomatic, for such pain. The persistence of symptoms with a moderate sized adnexal mass may again indicate the necessity for operation.

In the younger woman there is less likelihood of ovarian carcinoma being present and it may be safe to observe a 6 cm. cyst or one that is even larger for a longer period of time. Certain functional cysts, such as follicular or corpus luteum cysts, may be of this size and still disappear spontaneously. In the older woman the chance of

ovarian carcinoma is greater and it may be advisable to operate for somewhat smaller cysts or to decrease the period of observation.

The co-existence of pregnancy and an adnexal mass often presents a problem. In particular, the corpus luteum of early pregnancy frequently attains quite a large size. However, the same danger of malignancy attends ovarian cysts in the pregnant as in the non-pregnant woman, and the same rules for operation should apply. The only proviso is that it may be safer to defer operation until after the third month of pregnancy, so as to decrease the likelihood of abortion.

If operation is decided upon, the contents of the pelvis should be carefully examined with special reference to the other ovary and the uterus. Conservation of function, both reproductive and hormonal, should be the guide of every surgeon who enters the pelvis. Frequently the nature of an ovarian lesion is not easy to determine even at operation. In such cases it is wise to remove the cyst or tumor, open it and inspect it closely for evidence of malignancy. Frozen sections are often very helpful. If malignancy is clearly found, both ovaries and the uterus should be removed. In the younger woman, if the diagnosis of malignancy is not established at the time of operation, no more should be done than necessary. In the older woman, if there is doubt about malignancy, it is wisest to proceed with a bilateral salpingo-oophorectomy and hysterectomy. It is well always to remember the possibility of co-existent lesions in the opposite ovary. Dermoid cysts in particular are commonly bilateral. We routinely bisect the opposite ovary to exclude the possibility of another dermoid cyst. Mention should also be made of the small ovarian cyst discovered fortuitously at operation for other reasons. Conservation of ovarian function should be of first importance. The cyst may be punctured, incised or even excised, but ovarian tissue should be left in place unless there is certain evidence of malignancy.

SUMMARY

1. Many conditions may give rise to an adnexal mass. This finding is frequently encountered and differential diagnosis may be difficult.
2. The history and general physical examination, as well as the characteristics of the mass itself, may be of great help in diagnosis. The importance of the pelvic examination in the routine examination of women should be emphasized.
3. Operative treatment is generally advisable for the adnexal mass which is over 6 cm. in diameter, whether it is symptomatic or asymptomatic. The decision to operate is affected by observed changes in the mass, by the occurrence of symptoms, and by the age of the patient. The aim

of operative treatment should be conservation of reproductive and hormonal function unless the presence of malignancy is proven.

New Television Camera Helps in Medical Teaching—

A small television camera that is worn on the head has been devised to solve a difficult medical teaching problem—showing students critical areas within the ear, nose, throat, and other body cavities.

A pilot model of the camera has already been used in ear, nose and throat teaching. The camera is attached to a helmet worn by the examining doctor. Through a periscope lens, the camera picks up a picture of the cavity and carries it by closed circuit to a television set, which may be watched by any number of students.

The new teaching device is described by Paul Moore, Ph.D., and Hans von Leden, M.D., Northwestern University Medical School, Chicago, in the April 25 Journal of the American Medical Association.

They explained that normally only one person can look into a body cavity at one time. The problem in the past has been solved through the use of mirrors, which allows one other person to see, and photography, which, of course, prevents the students from seeing the area at the time the examination is done.

The authors believe that the new camera solves these and other problems. It allows the examiner to see the field clearly; it allows the examiner his normal range of motions, and it allows others to see the very same area as the examiner sees.

It has already been used in the clinic, classroom and operating room, and could be used for postgraduate teaching of physicians in their own home, office, or hospital, the doctors said.

The camera is mounted on a fiberglass helmet, with a periscope attached to the camera. The mirror and lens system of the periscope is so constructed that the image is reflected upward to the camera lens while allowing the same image to pass through to the eye of the examiner, the authors explained.

The camera weighs about 18 pounds—too much for an individual to carry on his head; therefore, a flexible supporting system comprised of a counterweighted bar resting horizontally on an adjustable vertical shaft with a T-shaped unit suspending the helmet was devised.

Light is provided through mirrors or a small lamp attached to the periscope.

The pilot model still needs some modification, the authors said. They hope that it can eventually be made to carry color, which would help to delineate the natural features of the areas being examined.

Although the number of cases of paralytic polio in this country last year increased by one-fourth over 1957, most epidemics in 1958 centered around groups where use of the Salk vaccine lagged. "The evidence is now overwhelming," says Health Information Foundation, "that the full series of three or more Salk inoculations provides a high level of protection from paralytic polio." Moreover, "No break in the safety of the vaccine has shown up since 1955."

THE CLINICAL USEFULNESS OF RETROGRADE BRACHIAL AORTOGRAPHY

WILLIAM R. MEEKER, M. D., L. STEPHENS RICHARDS, M. D.,
RICHARD GREENSPAN, M. D., ALAN P. THAL, M. D.
and
RICHARD L. VARCO, M. D.
Minneapolis, Minnesota

INTRODUCTION

During the past two years increasing use has been made of angiography in the diagnosis of obscure tumors of the thoracic and abdominal cavities, especially those of vascular origin. On plain roentgenograms and fluoroscopy, many of these lesions are not sufficiently characteristic to permit an accurate diagnosis. Since the correction of aortic aneurysms proximal to the left subclavian artery require the use of an oxygenator, it is of paramount importance to identify these lesions preoperatively. The following experiences illustrate the value of retrograde aortography:

ILLUSTRATIVE CASE REPORTS

Case No. 1, U. H. No. 922318: An asymptomatic 47-year-old salesman was admitted to University Hospitals for evaluation of a left superior mediastinal mass first noted on chest x-ray four and one-half months previously. Physical examination revealed only a diffusely enlarged thyroid gland known to have been present for some time. Retrograde brachial aortograms were done and confirmed a clinical impression of aneurysm of the arch and proximal descending aorta. Exploratory thoracotomy revealed a large calcified aneurysm arising several centimeters distal to the left subclavian artery and extending for 10 centimeters along the descending aorta. Resection and replacement with a homograft was postponed until a later date when a pump oxygenator was available because of the danger inherent in prolonged cross-clamping of the aorta. However, during the second procedure, cardiopulmonary by-pass was terminated when the patient developed a fall in blood pressure, followed in succession by ventricular fibrillation and cardiac arrest. Following resuscitation, the aneurysm was wrapped with a compressed teflon sponge and the patient recovered without detectable sequelae.

From the University of Minnesota Hospitals.

Dr. Meeker, a native of Mobile and a 1957 graduate of the Medical College of Alabama, is a Resident in Surgery in the University of Minnesota Hospitals. Dr. Varco is Professor of Surgery, University of Minnesota Medical School; Dr. Thal is Assistant Professor of Surgery, and Dr. Greenspan, Instructor in the Department of Radiology. Dr. Richards is a Research Fellow of the National Heart Institute. Dr. Thal is also an Established Investigator, American Heart Association.

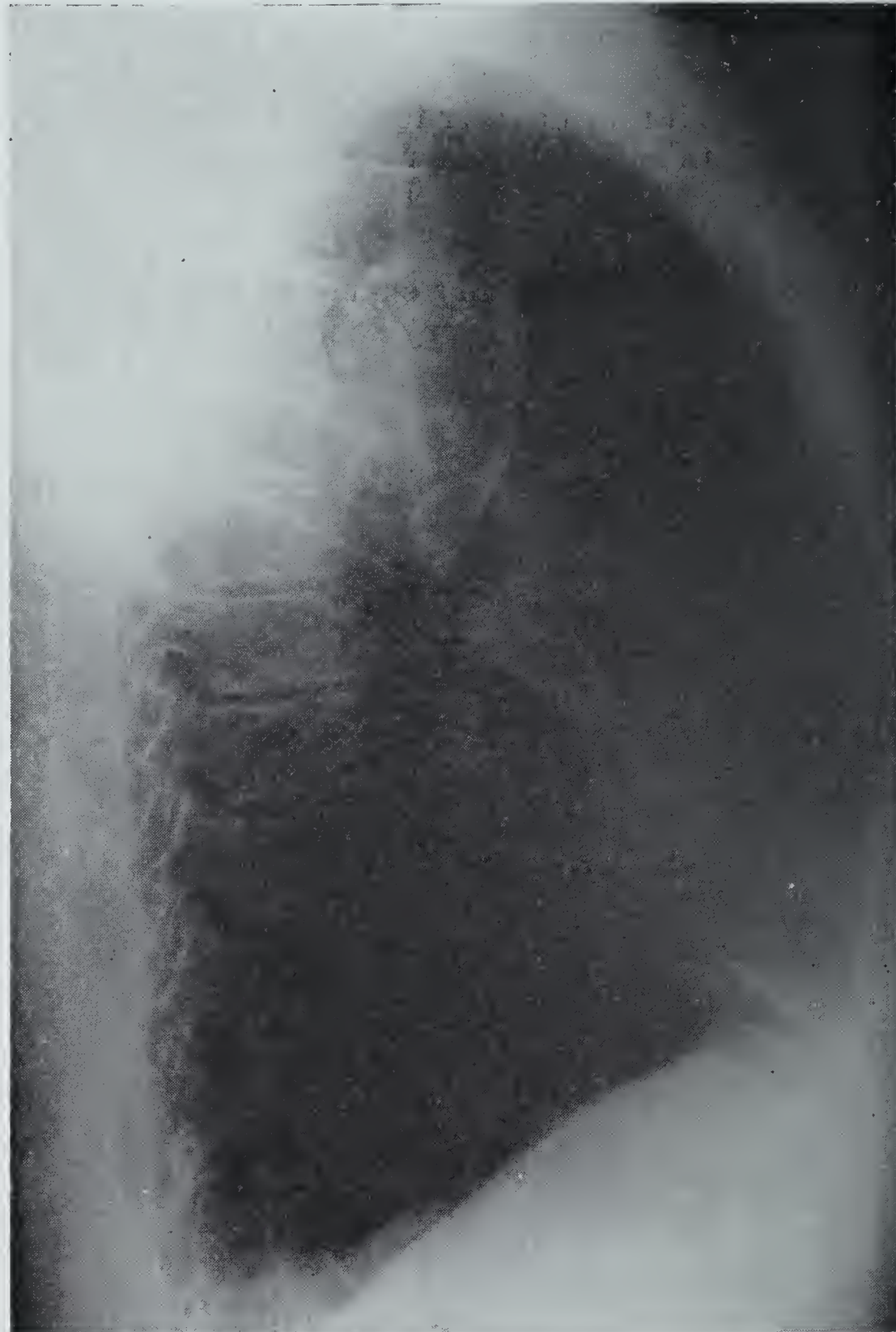


Figure 1: Case No. 1. X-ray showing aortic aneurysm with rim of calcification.

Case No. 2, U. H. No. 926796: This 73-year-old farmer was seen at University Hospitals with complaints of a chronic hacking cough for one year, a 25-pound weight loss over a three-year period, and puffiness of the face and neck for four months. Chest films taken two weeks previously showed a superior mediastinal mass. Physical examination was non-contributory. At cardiac fluoroscopy a calcified mass intimately associated with the ascending aorta, which displaced both trachea and esophagus posteriorly and to the left, was seen. Retrograde brachial aortograms were done which showed the mass to be extravascular. At surgery a large bronchial hamartoma was removed and the

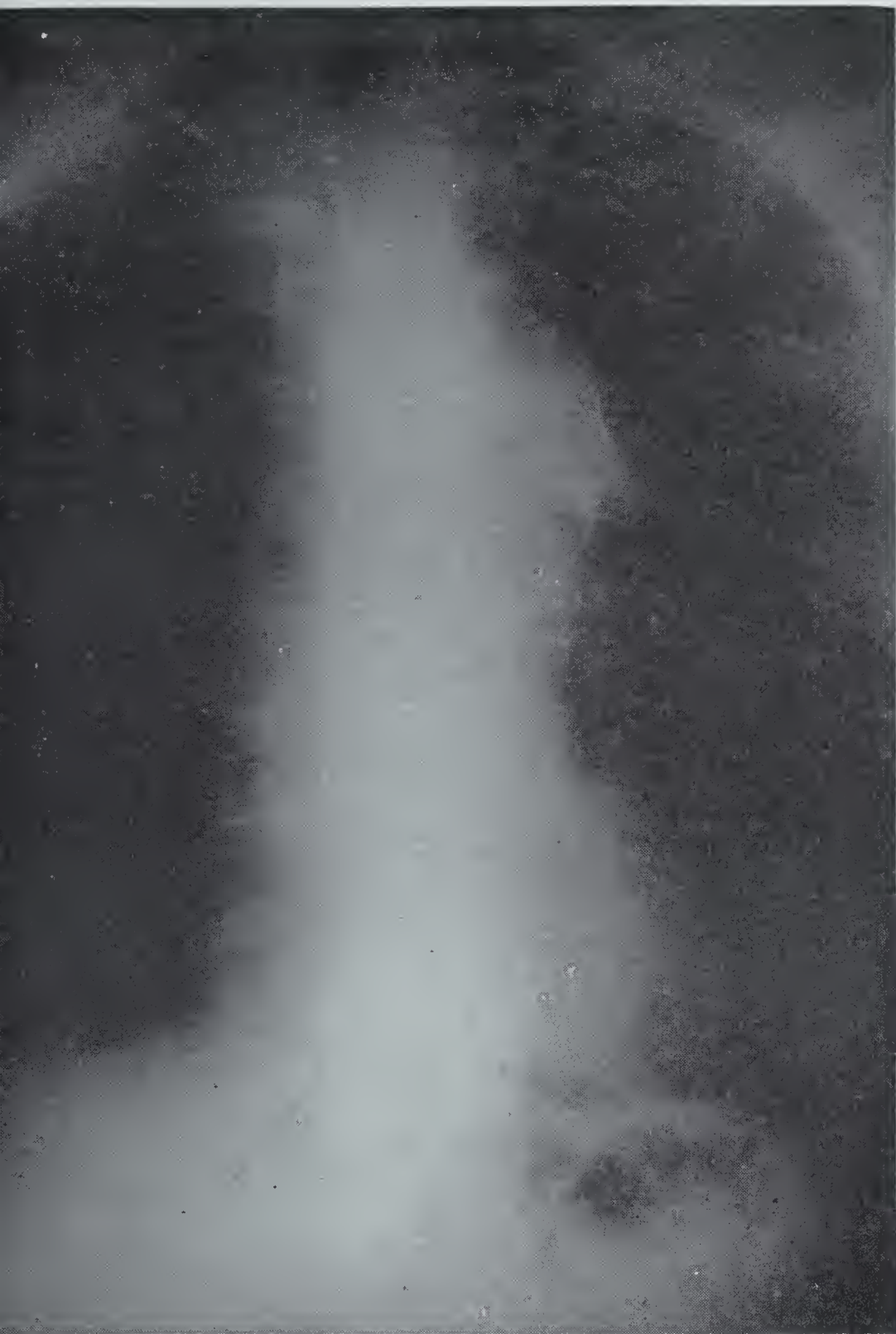


Figure 2: Case No. 1. X-ray showing aortic aneurysm with rim of calcification.



Figure 3: Case No. 2. X-ray showing superior mediastinal mass.

patient's postoperative course was complicated by a transient episode of auricular fibrillation controlled by digitalis.

Case No. 3, U. H. No. 651594: A 40-year-old housewife with a past history of a cardiac murmur noted since infancy and an attack of acute rheumatic fever in childhood was admitted for evaluation. She had had numerous previous admissions to University Hospitals and signs of congestive heart failure had been noted during two pregnancies. She had been on digitalis intermittently since age eighteen. Cardiac catheterization data were compatible with either patent ductus arteriosus or high interventricular septal defect. At exploratory thoracotomy two years previously a huge pulmonic artery and a thrill over the heart were noted but no ductus was found. Physical findings compatible with aortic insufficiency and possible aneurysm of the sinus of Valsalva developed in the two years following operation. Marked arterial oxygen desaturation had been recently noted in contrast to normal oxygen saturations at the time

of cardiac catheterization seven years previously. Hence a left to right shunt with reversal of flow was suggested. Retrograde brachial aortograms demonstrated a patent ductus arteriosus, together with a markedly enlarged pulmonary artery.

Case No. 4, U. H. No. 903250: This 17-year-old male was first admitted one and a half years ago with a history of cardiac murmur and hypertension in the upper extremities noted on routine physical examination one month previously. Blood pressures at that time were 180/90 in the upper extremities and 130/90 in the right leg while recumbent. An apical systolic murmur was also noted. Initial surgery in 1952 revealed a two and a half centimeter coarctation of the aorta which was resected and the left subclavian artery was divided high in the thorax and brought down and anastomosed to the aorta distal to the resected coarctation. The proximal aorta was closed with a running stitch. Followup physical examinations revealed persistent hypertension in the right upper extremity with a pressure of 190/110 and a cardiac murmur. Direct arterial pressure tracings revealed



Figure 4: Retrograde aortogram showing extravascular nature of mass.

systolic pressures of 140 and 80 in the right brachial and femoral arteries, respectively. Retrograde brachial aortograms several months ago revealed persistent narrowing of the aorta over a 5-centimeter segment in the proximal descending aorta with a good collateral blood supply around the constricted segment. At reoperation recently the narrowed segment was resected and a woven crimped teflon graft was used to bridge the defect after the subclavian aortic anastomosis was taken down. His postoperative course was complicated by atelectasis of the left upper lobe, associated with an episode of hypotension from which he recovered after appropriate therapeutic measures were instituted, and convalescence was otherwise uneventful.

DISCUSSION

The above cases amply illustrate the value of retrograde brachial aortography. In the first case the vascular nature of a mediastinal mass was established and a diagnosis of aneurysm was made. The absence of significant history or physical find-



Figure 5: Case No. 3. Contrast medium is seen filling pulmonary artery following its appearance in the aortic arch.

ings made the use of this special diagnostic aid mandatory. The converse was true in the second case where a mediastinal mass suspected of being an aneurysm was clearly shown to be extravascular by retrograde brachial aortography. The third case is especially interesting because a lesion was demonstrated which had been suspected on clinical grounds but careful surgical exploration had failed to reveal the lesion. Aortography revealed the precise location of the area of aortic constriction in the fourth case presented and surgical correction was facilitated. Continuing experience with retrograde brachial aortography has confirmed its value in establishing diagnoses in cases similar to those presented.

SUMMARY

(1) Four case reports are presented illustrating the facilitation of diagnosis of obscure lesions in the chest by means of retrograde brachial aortography.

(2) The chief function of retrograde aortography lies in differentiating vascular from non-vascular lesions. The contrast medium provides a clear delineation of vascular lesions.

(3) Lesions of the aortic arch proximal to the left subclavian artery which require the use of a pump-oxygenator for surgical therapy may be

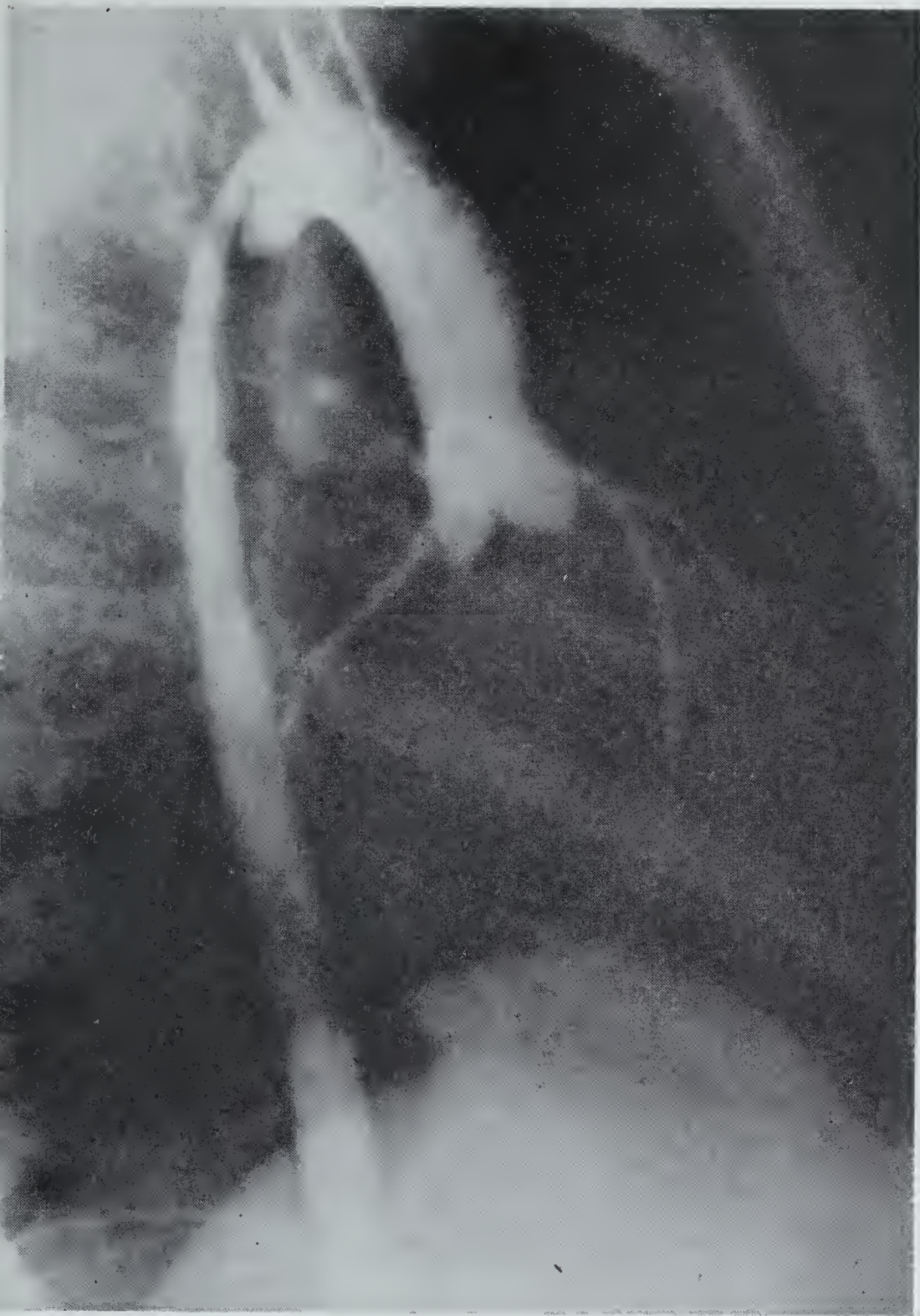


Figure 6: Case No. 4. Aortogram showing region of aortic narrowing and small aneurysmal dilatation distal to constricted area.

identified preoperatively by retrograde aortography.

(4) Lesions not amenable to surgical therapy may be identified preoperatively. The necessity of exploratory thoracotomy is also eliminated by retrograde aortography in obscure intrathoracic lesions.

REFERENCES

1. Johnson, J. B.; Balkisson, B., and Burton, A.: Retrograde Thoracic Aortography in the Differential Diagnosis of Large Mediastinal Masses Suspected as Aneurysms of the Aortic Arch or One of Its Branches, *Am. Prac. and Digest of Treatment* 8: 207-210, February 1957.
2. Sussman, M. L.: Differentiation of Mediastinal Tumors by Angiography, *Am. J. Roentgenol.* 58: 584-590, November 1947.
3. Stein, J., and Poppel, M. H.: Hamartoma of the Lungs, *Am. J. Surg.* 89: 439-444, February 1955.
4. Steinberg, E. I.: The Diagnosis of Arteriosclerotic Aneurysms of the Thoracic Aorta, *Ann. Int. Med.* 46: 218-246, February 1957.
5. Thal, Alan P.; Lester, R. G.; Richards, L. S., and Murray, M. J.: Coronary Arteriography in Arteriosclerotic Disease of the Heart, *Surg., Gynec. and Obst.* 105: 457-464 October 1957.

Medicine-Press Cooperation Saves Children's Lives— Many small children may be saved from death because physicians and newsmen have cooperated in alerting the nation to the danger of plastic drycleaning bags.

The danger, according to an article in the April 25 *Journal of the American Medical Association*, is that they may cause suffocation.

The nationwide alert went out this spring after four Phoenix, Ariz., children died by suffocation while playing with plastic bags.

Dr. Paul B. Jarrett, chairman of the Maricopa County Medical Society's safety committee, became concerned, drafted a warning, and sent a copy to the *Arizona Republic*, "a newspaper whose editorial staff immediately recognized a public service duty inherent in the news itself," according to the *Journal* article.

Wire services picked up the story and carried it across the country. The A. M. A. Committee on Toxicology sent a warning to health departments, poison control centers, and other interested groups. Health departments in Chicago and New York issued their own warnings and the National Safety Council is now preparing one.

"There is no way," the article said, "of determining how many young lives will be saved because of one physician alerting many—and because of newsmen then carrying the word to millions. That young lives were and will be saved cannot be doubted. . . ."

Dr. Jarrett was quoted in the article as explaining how the plastic bags cause trouble. He said, "An electrostatic charge may have been generated by friction from handling. The youngster, in peering through this material, is apt to have it literally grab him through electrical attraction to his face. If this happens, only the prompt intervention of an adult will prevent tragedy.

"This dangerous material won't tear when a child fights it. Dizziness, inability to think, spasms of muscles occur with more and more rapid breathing. Vomiting with inhalation of undigested food puts a finish to this terrible tragedy."

Dr. Jarrett believes that the alarm against these bags—now used so often by laundries and drycleaners—cannot be repeated too often.

He said, "Such a horrible combination as a child playing with a venomous reptile would not result in death as quickly as suffocation by the plastic film which clings to the face with diabolical tenacity.

"These deaths are the result of carelessness. They could have been prevented. Through knowledge they will be prevented in the future."

The belief that polio is a "disease of the past" may be keeping people from getting their full series of Salk injections, says Health Information Foundation. Only about half the U. S. population under age 40 had been fully vaccinated by the beginning of 1959.

The number of cases of paralytic polio in the United States was 24 per cent higher for 1958 than 1957—apparently because apathy is keeping many people from getting their Salk injections. "Vaccinations were distressingly few during 1958," Health Information Foundation declares.

Despite sharp drops in the incidence of polio since the development of the Salk vaccine, many persons in the most susceptible age groups remain unprotected. Only 45 per cent of the preschool children in this country, and only 30 per cent of the adults 20-39 years old, have been fully vaccinated, according to the Foundation.

TRIMEPRAZINE, AN ORAL ANTIPRURITIC A CLINICAL AND DOUBLE-BLIND EVALUATION

IRVING D. LONDON, M. D.

Montgomery, Alabama

Of all symptoms in dermatology, itching remains the single most important one. Various drugs, too numerous to mention, have been used topically, parenterally, and orally for the control of this symptom, usually with variable success. Recently, a new phenothiazine derivative, trimeprazine (Temaril*), has been reported to be valuable in the relief of itching when taken orally. The first two reports of trimeprazine^{1,2} spoke of it in fairly glowing terms; Callaway and Olansky² show that 82% of their patients with various skin conditions received good or excellent relief of itching while taking the drug.

Because of Kligman's³ criticism of the lack of controlled, double-blind studies in the enthusiastic reports on trimeprazine, this writer was stimulated to determine, first, whether this drug was as beneficial as previously reported; and, second, whether this beneficial effect could stand the rigors of a controlled, double-blind study.

PATIENT SELECTION

The first experiment was a clinical study of 51 private patients with various pruritic dermatoses who were given trimeprazine orally, in various dosages, to determine whether this drug relieved itching. The second study was a controlled, double-blind study of trimeprazine in 104 similar patients. All patients were seen in private practice, and were selected on the basis of the severity of their itching. Some patients had previously taken other drugs with poor results; several had had their itching dermatoses for one or more years. These studies were carried out from January to July of 1958.

Blood and liver function studies were not carried out routinely in either group of patients, as trimeprazine was to be given for relatively short periods of time, and in comparatively small doses. Pre-

vious studies¹ on hospitalized patients taking up to 40 mg. of trimeprazine daily (4 times the dose used in this study) had shown the drug to be free of photosensitivity reactions and of other toxic effects.

TEST 1: CLINICAL GROUP

This group of patients consisted of 17 males and 34 females, ranging in age from 6 months to 83 years. A grey coated tablet containing 2.5 mg. of trimeprazine or a syrup containing 2.5 mg. of the drug per 5 cc. (one teaspoonful) was used throughout the evaluation. The syrup was used in infants and children too young to take the tablet.

Initially, most patients were given 2.5 mg. of trimeprazine after meals and 2.5 or 5 mg. at bedtime. Infants under one year of age were given 1.25 mg. three or four times daily. One child, however, received 3.75 mg. (1½ teaspoonsful) several times daily with no untoward effects. According to the patient's response, the dose was later adjusted, usually decreased during the day and increased at bedtime (up to 5 or 7.5 mg.). All oral and parenteral medication was stopped for at least one week during the test, and topical applications were kept to a minimum. The patients were usually allowed only a cream they had already been using, or were given cool, topical compresses of Burow's solution 1:30, twice daily. Steroids, topically, orally, or parenterally, were not allowed. The patients were observed at 5 to 7 day intervals for 3 or 4 weeks.

Results for this group of patients are shown in Table I. Results were classified excellent if there was complete relief of itching; good, if there was substantial relief; fair, if there was some relief;

TABLE I
CLINICAL RESULTS OBTAINED WITH TRIMEPRAZINE
IN 51 PATIENTS

Diagnosis	Number Treated	Results			
		Excellent	Good	Fair	Poor
Neurodermatitis	14	9	4	0	1
Pruritus*	2	1	0	0	1
Urticaria (acute)	1	0	0	0	1
Dyshidrotic eczema	5	3	1	0	1
Infantile eczema	10	6	2	2	0
Pruritus ani & vulvae	3	1	1	1	0
Allergic dermatitis	1	0	1	0	0
Seborrheic dermatitis	9	6	1	2	0
Other**	6	4	1	0	1
TOTALS	51	30(58.8%) 11(21.6%)		5(9.8%) 5(9.8%)	
		80.4%		19.6%	

* Generalized/neurogenic.

** Psoriasis/tinea pedis/mycosis fungoides/lichen planus/lichen simplex/chickenpox.

4. Cahn, Milton M.: Personal Communication.

*The Temaril and placebo used in this study were supplied through the courtesy of Smith Kline and French Laboratories, Philadelphia, Pennsylvania. Chemically, trimeprazine is dl-10(3-dimethylamino-2-methylpropyl) phenothiazine.

1. Pillsbury, D. M.; Shelley, W. F.; Hambrick, G. W.; Hamilton, W. L., and Messenger, A. L.: Temaril—A New Antipruritic, The Schoch Letter (Current News in Dermatology) 45: (November) 1957.

2. Callaway, J. L., and Olansky, S.: Trimeprazine: An Adjuvant in the Management of Itching Dermatoses, North Carolina M. J. 18: 230-231, 1957.

3. Kligman, A. M.: What's New and What's True of What's New? Read at the American Academy of Dermatology meeting, Chicago, Illinois, (December) 1957.

and poor, if there was no relief. It is noteworthy that 41 (80.4%) patients reported excellent or good relief. Statistically, this compares favorably with Callaway's report² in which 82% of the patients reported complete or considerable relief of itching.

In some cases, itching was relieved dramatically. This was especially true in most of the patients with infantile eczema, as these children itched interminably and rested very poorly. Within a few days to a week, they were sleeping the night through, and their itching was diminished considerably, or was absent altogether. One patient with pruritus vulvae who was wearing a plaster cast for a fracture of the femur reported that the drug relieved itching under the cast as well as the vulvar itching. Intense nighttime itching which frequently caused sleeplessness was controlled by increasing the bedtime dose of trimeprazine. Only rarely, and then only when 7.5 or 10.0 mg. were taken at bedtime, was morning lethargy reported. Some patients, after their itching was relieved initially, were able to reduce their overall dose by omitting one or more daytime doses and by taking the medication at the time of day when they experienced their greatest amount of itching. Some patients could be maintained on one tablet at bedtime.

It should be pointed out, however, that, although itching was relieved in approximately 80% of the patients in this group, no dermatoses were "cured." Usually, excoriations or excoriated papules were gone or considerably improved within a week, but thick lichenified plaques, if present, persisted. Appropriate topical therapy was later instituted in these patients.

Trimeprazine was well tolerated by all but one of the patients in this group. This patient, a four-year-old girl with childhood eczema, experienced nausea and vomiting when the dose was increased

for 2 days to 2.5 mg. after supper and 5.0 mg. before bedtime. On reducing the dose by one-half, the nausea and vomiting subsided. This child has subsequently taken 2.5 mg. several times daily over a period of several months with no repetition of nausea.

TEST II: DOUBLE-BLIND GROUP

A controlled, double-blind study to compare the antipruritic effects of trimeprazine with those of a placebo was carried out in 104 patients (32 males and 72 females) from private practice. Their ages ranged from 10 years to 88 years (9 from ages 10 to 18, and 95 above age 20). Trimeprazine was supplied as a 2.5 mg. grey coated tablet; an identical looking tablet containing calcium sulfate was supplied as the placebo. Fifty-eight patients received trimeprazine, and 46 received the placebo as a first course of therapy. Neither the physician nor the patient knew which tablet was being used during the course of the test.

Patients were originally instructed to take one 2.5 mg. tablet after meals and at bedtime, with instructions to double or triple the bedtime dose, if necessary. Patients were observed at intervals of from 5 to 7 days, and received the medication for periods up to three weeks before the actual efficacy of the tablet they were taking was determined. In twenty-four patients the medications were alternated without the physician knowing which was being given. Usually this was done because the patient had experienced no relief, even with larger doses. In a few instances, although the patient reported relief of itching, the examiner was curious to see how much relief the alternate medication would give.

Results seen during the controlled evaluation paralleled those observed during the preliminary clinical test of the drug. When itching was con-

TABLE II
RESULTS OF CONTROLLED, DOUBLE-BLIND STUDY COMPARING TRIMEPRAZINE WITH A PLACEBO

Diagnosis	Num- ber Treated	Placebo				Num- ber Treated	Trimeprazine				Total Number Treated
		Excellent	Good	Fair	Poor		Excellent	Good	Fair	Poor	
Neurodermatitis generalized	9	3	1	1	4	6	5	1	0	0	15
Neurodermatitis localized	8	1	2	1	4	7	3	1	2	1	15
Dyshydrotic eczema (hands)	6	2	1	0	3	3	2	1	0	0	9
Atopic (childhood) eczema	2	0	1	0	1	2	0	2	0	0	4
Seborrheic dermatitis	3	1	0	1	1	8	8	0	0	0	11
Contact dermatitis	4	1	0	0	3	7	5	1	1	0	11
Pruritus ani et vulvae	0	0	0	0	0	7	5	0	1	1	7
Tinea pedis	0	0	0	0	0	1	1	0	0	0	1
Erythema multiforme	2	1	1	0	0	1	0	0	0	1	3
Neurotic excoriations	3	2	1	0	0	4	4	0	0	0	7
Pityriasis rosea	2	2	0	0	0	0	0	0	0	0	2
Infectious eczematoid dermatitis	2	0	0	1	1	1	1	0	0	0	3
Psoriasis with pruritus	2	0	1	1	0	1	0	0	0	1	3
Stasis dermatitis	0	0	0	0	0	3	1	2	0	0	3
Icterus with pruritus	0	0	0	0	0	1	1	0	0	0	1
Herpes zoster with pruritus	0	0	0	0	0	1	0	0	0	1	1
Varicella with itching	0	0	0	0	0	1	0	1	0	0	1
Dermatitis generalized (cause undet.)	0	0	0	0	0	1	1	0	0	0	1
Sycosis barbae	0	0	0	0	0	1	0	0	0	1	1
Otitis externa	2	0	0	0	2	1	1	0	0	0	3
Dermatitis medicamentosa	1	0	0	0	1	1	0	0	1	0	2
TOTAL	46	13(28%)	8(17%)	5(11%)	20(44%)	58	38(66%)	9(15%)	5(9%)	6(10%)	104
		45%		55%			81%		19%		

trolled, the rapidity of action, response to increased doses, and the incidence of side effects varied so little, it was impossible to distinguish which patients had been given the placebo. This seems to indicate that "true" placebo reactors mimic, in every way, the actions ordinarily obtained with an active drug. Other investigators have described this observation.⁵ In some patients, particularly those with long-standing dermatoses, the relief of itching was dramatic. The patients were enabled to control previously uncontrollable bouts of scratching, and many of them slept better for the first time in several weeks. It was not until the code to the study had been revealed and the proportions of degrees of response to treatment had been totaled that the superiority of trimeprazine was evident. These results, classified according to the criteria previously outlined, are given in Table II. Of the 46 patients who received the placebo as a first course of medication, 21 (45.6%) obtained excellent or good results, and 25 (54.4%) received fair or no (poor) relief of itching. Of the 58 patients who received trimeprazine initially, 47 (81%) had excellent or good relief of itching, and 11 (19%) had fair or no relief. When tested statistically (standard two-celled chi-squared test), the chi-squared value for these data is 14.18; the corresponding probability value (p value) is less than .001, and indicates that the difference between the data is highly significant in favor of trimeprazine.

in this report, there were too few patients who received trimeprazine as a first course of therapy (see line two of Table III) to permit a valid statistical test of these data. This writer believes now that all the patients should have received both drugs alternately.

SIDE EFFECTS

Side effects, severe enough to warrant discontinuing the medication, were reported by 10 patients during the double-blind evaluation (Table IV). Six of these patients were on trimeprazine, and 4 were on placebo when they reported the reactions. Drowsiness was noticed in several additional patients who were on the active drug, but not until they had taken doses of 7.5 or 10.0 mg. nightly. On reducing the dose, drowsiness subsided, and the patients were able to continue small doses of the medication without further effects. Since the double-blind study has been completed, one new patient who had received trimeprazine for lichen simplex of the ankles was observed to have a generalized maculopapular eruption, which was probably related to the administration of trimeprazine. This rash did not clear with steroid therapy while trimeprazine was being given, but, on omitting trimeprazine, the eruption cleared slowly. There was no clinical evidence of jaundice

TABLE III
GROUPING RESULTS OF CROSSOVER STUDY OF PATIENTS RECEIVING EITHER
PLACEBO OR TRIMEPRAZINE AS A FIRST COURSE OF THERAPY

First Course of Therapy	Number Treated	Results				Second Course of Therapy	Results			
		Excell.	Good	Fair	Poor		Excell.	Good	Fair	Poor
Placebo -----	20	3	2	3	12	Trimeprazine -----	12	5	0	3
Trimeprazine -----	4	0	0	2	2	Placebo -----	1	1	0	2

The results of the crossover tests in which twenty-four patients received the placebo and trimeprazine alternately are grouped in Table III. Of the twenty patients who received placebo first, five obtained adequate relief of itching; seventeen of them obtained complete or substantial relief when taking trimeprazine. A statistical test (two-celled chi-squared test) of the data on the first line of this table gives a chi-squared value of 18.54. The corresponding probability value is less than .001, and indicates that the results produced by trimeprazine are statistically superior to those produced by the placebo. According to the statisticians* who analyzed and checked all the data

*The author is indebted to Mr. Virgil M. McIntosh, Analytical Statistician, Maxwell Air Force Base, and Dr. Eldredge Scales, Director of Institutional Research, Tuskegee Institute, Alabama, for their help with the statistical analyses included in this report.

5. Beecher, H. K.: The Powerful Placebo, J. A. M. A. 159: 1602, 1954.

nor of photosensitivity in any of the patients seen in this study either during or following trimeprazine therapy.

TABLE IV
SIDE EFFECTS OF DOUBLE-BLIND STUDY

Nature of Side Effect	No. Reported	Placebo	Trimeprazine
Drowsiness -----	3	0	3
Urticaria -----	1	1	0
Nausea -----	1	1	0
"Dopey" -----	1	0	1
Nervous and depressed -----	1	0	1
Dizziness -----	1	1	0
"Groggy" -----	1	1	0
Nervousness -----	1	0	1
Totals -----	10	4	6

DISCUSSION

The results of this evaluation and those of other investigators⁵⁻¹⁰ indicate that the administration of a placebo is capable of producing, in a heterogeneous clinical population, favorable symptomatic relief as well as subjective sensations that can be classified as "untoward effects." These observations have led several investigators¹¹⁻¹³ to conclude that "The placebo is especially powerful as an antipruritic," and that "The ability of a drug to relieve pain (or itching) should not blunt the physician's interest in determining whether it is a placebo, sedative or specific agent." It is obvious, therefore, that, for some patients, effective results are not dependent on the pharmacologic effects of the drug being administered but are a result of a variety of influences.

Modell and Houde¹⁴ have recently described the forces which may influence data obtained from clinical evaluations, especially when subjective responses are involved, as: 1) pharmacodynamic actions, 2) dosage, 3) choice of subjects, 4) use of controls, 5) collection of data, 6) sensitivity of the method, 7) placebo actions, 8) bias, and 9) forces extraneous to the experiment. With the exception of point number nine, all these factors were compensated for in the present evaluation by randomizing patient selection and drug or placebo administration, alternating the medications so that patients could serve as their own controls, using the "double-blind" technique, adjusting dosages, and by choosing subjects for whom the medication is ultimately intended. With such

an experimental design, the influencing factors are not eliminated, but are evenly (or nearly evenly) divided throughout the population being tested. The value of the drug being tested then depends on the magnitude of the difference in the proportions of the degrees of response obtained for each group. In this evaluation, the results of the statistical analysis of the difference between the proportion of excellent and good, and fair and poor responses indicate that trimeprazine is greatly superior to the placebo. This same superiority is demonstrated by the results of the statistical analysis of the results obtained in patients who received the drugs alternately.

Relief of itching and, concurrently, the ability to sleep as a result thereof were dramatic in many instances. However, trimeprazine is not a "cure." It merely affords symptomatic relief of itching, regardless of whether the itching is neurogenic, is generalized or localized, is associated with chickenpox, or whether it occurs under a plaster cast. The relief of itching alone did not clear up old, long-standing lichenified patches of neurodermatitis, or chronic vesicles of dishydrotic eczema. However, once the patient was relieved of his primary complaint, it was comparatively simple to follow up with more definitive treatment of the involved areas.

The mechanism by which trimeprazine controls itching is unknown. It probably acts on the central nervous system to reduce itch perception.

SUMMARY

A preliminary clinical evaluation of patients with itching due to various dermatologic or systemic disorders indicated that trimeprazine relieved pruritus, either completely or substantially, in 41 (80.4%) of 51 patients.

A controlled, double-blind evaluation in similar patients showed that trimeprazine relieved itching effectively in 47 (81%) of 58 patients, whereas an inactive placebo produced adequate antipruritic benefits in 21 (45%) of 46 patients. The results of a statistical analysis of the difference between these results indicate that trimeprazine is superior to the placebo (p value = $<.001$). A statistical analysis of the results of a crossover study in twenty-four patients also showed trimeprazine to be superior to the placebo (p value = $<.001$).

Side effects, none of which were serious, but were troublesome enough to warrant discontinuing the medication, were encountered in six patients taking trimeprazine and four taking the placebo. Drowsiness which could be overcome by reducing the dosage was encountered most frequently. No severe toxic reactions were noted.

The mechanism of action of trimeprazine is unknown; it is presumed that it acts centrally.

122 South Ripley St.

6. Lasagna, L.; Mosteller, F.; Von Felsinger, J. M., and Beecher, H. K.: A Study of the Placebo Response, *Am. J. Med.* 16: 770-779, 1954.

7. Beecher, H. K.: Appraisal of Drugs Intended to Alter Subjective Responses, Symptoms. Report to Council on Pharmacy and Chemistry, *J. A. M. A.* 158: 399-401, 1955.

8. Wolf, S., and Pinsky, R. H.: Effects of Placebo Administration and Occurrence of Toxic Reactions, *J. A. M. A.* 155: 339-341, 1954.

9. Batterman, R. C., and Grossman, A. J.: Effectiveness of Salicylamide as an Analgesic and Antirheumatic Agent: Evaluation of the Double-Blind Technique for Studying Analgesic Drugs, *J. A. M. A.* 159: 1619-1622, 1955.

10. Moyer, J. H.: The Psychosomatic Problem in Drug Evaluation: The Importance of Studying Pharmacodynamics and Establishing Effective Dosage Schedules, *A. M. A. Arch. Int. Med.* 98: 608-616, 1956.

11. "Placebos," Editorials, *J. A. M. A.* 159: 780, 1955.

12. Shelley, W. B., and Arthur, R. P.: The Neurohistology and Neurophysiology of the Itch Sensation in Man, *A. M. A. Arch. Dermatology*, 76: 296-323, 1957.

13. Russek, H. I.: Correspondence, Vasodilator Drugs and Anginal Syndrome, *J. A. M. A.* 158: 216, 1955.

14. Modell, W., and Houde, R. W.: Factors Influencing Clinical Evaluation of Drugs, *J. A. M. A.* 167: 2190-2199, 1958.



A. M. E. F.

The month of May has been selected as the time for our annual campaign for contributions to the American Medical Education Foundation.

A. M. E. F. was established by the American Medical Association as a channel through which the medical profession may contribute to the medical schools of the nation. All operating costs are paid by the American Medical Association so that the donation in full goes to the medical schools for their unrestricted use. All contributions are tax deductible and may be earmarked for a specific school. Since its creation in 1951 A. M. E. F. has raised nearly eight million dollars for medical education.

Last year 536 doctors in Alabama contributed \$8,387.16 through A. M. E. F. This is a considerable increase over the previous year but still represents only a fraction of our total members.

The A. M. E. F. campaign this month will be a success in Alabama if each of us will contribute a minimum of \$10.00 toward our goal of \$15,000.00.

We hope you will make your contribution immediately since our drive ends on May 31.

PUBLIC APATHY THREATENS POLIO GAINS

Recent progress against paralytic polio is threatened by the fact that only half the U. S. population under the age of 40 has had the full series of Salk inoculations, according to Health Information Foundation.

In its monthly statistical bulletin, *Progress in Health Services*, the Foundation pointed out that the number of cases of paralytic polio rose in 1958 after declining each year since the introduction of the Salk vaccine in 1955.

"Public apathy about the injections may be an unfortunate result of scientific progress," said George Bugbee, Foundation president. "Recent advances against polio have been so striking that many people may look upon it as a disease of the past."

Up to a few years ago, the Foundation reported, "polio was a widespread and constantly increasing danger, and little could be done to control it." The

Editorials

number of cases in this country rose steadily through the first half of the century, reaching a peak of almost 58,000 in 1952.

With the coming of the Salk vaccine, however, the incidence dropped sharply, and in 1957 only 5,500 cases (including 2,500 paralytic) were reported. "The evidence is now overwhelming," said the Foundation report "that the full series of three or more Salk inoculations provides a high level of protection from paralytic polio."

"Provisional figures for 1958 indicate that the number of cases rose to more than 6,000, including 3,100 paralytic cases. Most of last year's victims were persons who had not been fully vaccinated, and local epidemics were concentrated among the less advanced socio-economic groups, where levels of vaccination were lowest.

"The major problem today is to bring the benefits of the Salk vaccine to the entire population, especially those under age 40," the Foundation stated. Estimates by the National Foundation for the end of 1958 indicate that 41 million persons in this age group had not been vaccinated at all, and an additional 16 million were incompletely vaccinated.

"Only 57 million—one half of the population of this age group—have had the full series of three or more shots. Vaccinations were distressingly few during 1958. The need is sharpest at the preschool ages and at 20-39, where only 45 and 30 per cent, respectively, are fully vaccinated."

Medical authorities suggest that Salk vaccine protects against polio for at least three years and possibly longer, the Foundation reported. Moreover, "no break in the safety of the vaccine has shown up since 1955."

Current research efforts cited by the Foundation include an attempt to develop a more powerful vaccine that can be taken by mouth. But "universal immunization" with even the present vaccine could signal "the virtual end of mankind's most destructive disease."

ASPIRIN CONTROLS SYMPTOMS IN ACUTE RHEUMATIC FEVER

Intensive penicillin therapy of acute rheumatic fever reduced the incidence of valvular heart dis-

ease, but was ineffectual in treating acute clinical symptoms, which were readily controlled by aspirin, an international team of investigators states in the *New England Journal of Medicine* (260:101, 1959).

Results of the study suggest that the pathogenesis of arthritic and constitutional symptoms, and that of rheumatic valvulitis, differs, according to Dr. Edward A. Mortimer, Jr., and a group of co-workers. The research was conducted by the National Health Service of Chile, the University of Chile, Western Reserve University School of Medicine, and Cleveland Metropolitan General Hospital.

The effect of an intensive six-week period of treatment with penicillin was evaluated in 66 rheumatic fever patients, of whom 34 received the antibiotic and 32 served as controls. Included were patients with previous histories of valvular heart disease; those with chorea were excluded.

Aspirin was given for two weeks after treatment started both to the treated and control groups. Although fever decreased markedly during the first few days, a definite rise was observed in both groups after aspirin was discontinued. Slightly higher temperatures persisted in the penicillin group thereafter.

A sharp decrease was also noted in the incidence of joint symptoms in both series during the first few days that aspirin was administered, with no detectable differences between the groups.

At the end of a year's treatment with penicillin, the authors found a significant reduction of valvular disease in patients with moderate or no signs of valvulitis at the start of treatment. Of these patients, 52 per cent of the control group showed valvular disease one year later, compared with 21 per cent of those on penicillin.

At the same time, it was learned that penicillin had no effect upon the clinical, laboratory and electrocardiographic manifestations, which aspirin "readily controls."

ATABRINE FOUND EFFECTIVE IN 15 OF 16 PETIT MAL CASES

Distinct clinical improvement was observed in 15 of 16 children with petit mal following prolonged treatment with the antimalarial drug Atabrine (Winthrop), Dr. R. A. Miller states in the *Scottish Medical Journal* (3:441, 1958).

Six children became asymptomatic and symptoms were less marked in the remaining nine. Definite improvement in severity and frequency of attacks was noted within a few days after Atabrine therapy was started. The children were treated for periods ranging from three months to 31 months at the University of Edinburgh and

the Royal Hospital for Sick Children in Edinburgh.

Dr. Miller reports that the 16 children had previously failed to respond to Tridione and other anticonvulsants. In addition to objective improvement, the parents of 15 children in the series were convinced that Atabrine was more effective than previous drugs.

Concurrent with a reduction in petit mal attacks, the erratic behavior problems of six out of nine patients were brought under control. Other beneficial results were: increased bladder control and fewer attacks of akinesia and psychomotor epilepsy.

Combination therapy with Atabrine and Tridione enhanced the value of the anticonvulsant, according to Dr. Miller.

RURAL COMMUNITY PROBLEMS

The need for individual communities to solve their own rural health problems—whether they be those of the aging population or the lack of physicians—was outlined by two dozen speakers at the 14th National Conference on Rural Health, sponsored by the American Medical Association.

The current trend toward socialized health care cannot be reversed merely by preaching against it, according to Earl L. Butz, Ph.D., dean of agriculture at Purdue University, Lafayette, Ind.

"Aggressive community participation in positive action programs is the best answer to the philosophy held by some people that 'Washington will take care of my social security and welfare,'" he said.

Private enterprise and private initiative must be kept as the "senior partner" in local activities and government, Dr. Butz said, adding that if those services a community decides it must have are not provided by local people and local organizations, they will be provided by the government.

"We must be ever vigilant that our local communities assume the responsibilities put upon them by our private enterprise system," he concluded.

Examples of local enterprise were presented by J. D. Smerchek of the Kansas Farm Bureau, Manhattan, and Roy Battles, assistant to the master of the National Grange, Washington, D. C. Both groups have active rural health programs in which rural persons are—in the words of the A. M. A. Council on Rural Health—helped to help themselves to better health.

One area in which communities can—and must—help themselves is that of meeting the problems of the aging population, according to Aubrey D. Gates, director of the A. M. A. Division of Field Services. Each community has the resources, the

courage and the determination to meet the problems of this group.

The first step in meeting the needs of the aging is an inventory of community assets in the form of its elder citizens—their number, their problems, and their experiences that can be used by the community. Then their needs must be measured and decisions made about how and what is necessary to meet them.

Gates pointed out that many steps are being taken to help communities meet the needs of their aged citizens. These include requests by the A. M. A. that the Congress make available funds to help in the construction of community nursing homes; plans and suggestions offered for building and maintaining safer, more modern facilities; plans for visiting nurse service; suggestions for better home care, and plans for more adequate insurance for the aged.

He urged churches and other organized community groups to help in developing programs for the aged. State committees of doctors interested in rural health and aging may be contacted for help and advice.

Dr. Franklin D. Murphy, chancellor of the University of Kansas, Lawrence, decried the "great perversion of values" now occurring in the United States. This "deadly disease" must be fought through the conservation of human talent and its proper application, he said. We must do more to "avoid waste of human resources, both of mind and body."

As one example of this conservation and application, he believes that in rural America there must be better planning to provide area medical services. He suggested a large general hospital in one community with smaller satellite hospitals in the periphery, with patients flowing freely in both directions. In this way, costly duplication of facilities can be avoided and maximum use can be made of limited personnel and talent.

AM. PUBLIC HEALTH ASSOCIATION

Health authorities from various parts of the world are being invited to report on significant new programs at the 87th annual meeting of the American Public Health Association and meetings of related organizations in the Atlantic City Convention Hall, October 19-23, the association's executive director has announced.

Dr. Berwyn F. Mattison said that sessions will emphasize both practical community applications of recent scientific developments and "a timely review of the scientific bases for public health work."

Expected to attend are more than 4,000 public health specialists serving in governmental and

voluntary agencies, industrial health work and private practice. They will include state, county and local health officers and staff members of the World Health Organization and U. S. Public Health Service.

Highlights will include presentation of the annual Albert Lasker Awards of the American Public Health Association and the Sedgwick Memorial Medal, highest awards in public health.

Plans call for scientific and industrial exhibits as well as scientific sessions and workshops.

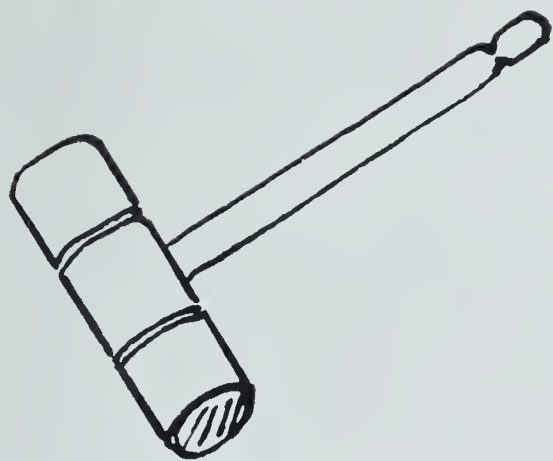
Scientific sessions are being planned by the Association's 14 specialized sections: dental health, engineering and sanitation, epidemiology, food and nutrition, health officers, laboratory, maternal and child health, medical care, mental health, occupational health, public health education, public health nursing, school health and statistics. Sections are planning joint sessions on topics of interest to several specialties.

Among related organizations planning sessions are the American Association of Public Health Physicians, American College of Preventive Medicine, American Industrial Hygiene Association, American National Council for Health Education of the Public, Association of Business Management in Public Health, Association of Schools of Public Health, Industrial Medical Association, Joint Commission on Mental Illness and Health and the Public Health Cancer Association of America.

The American Public Health Association, with headquarters at 1790 Broadway New York, has more than 13,500 members and is the largest American professional organization of public health specialists. Its president is Dr. Leona Baumgartner, Commissioner of the City Health Department of New York.

During the past year the Association expanded and reorganized its program to meet changing needs. It now has regional offices in San Francisco and Washington, D. C. Projects now in progress include the development of guides and manuals for community health study; for services to children with orthopedic handicaps, emotional disturbances and heart conditions; control measures for mental disorders; radiologic health practice; control of nutritional diseases; chronic disease programs for state and local health departments.

Local arrangements are being made by a committee headed by Dr. Samuel L. Salasin, Health Officer of Atlantic City, N. J., and Dr. Daniel Bergsma, New Jersey State Commissioner of Health.



President's Page

MY INTENT

IT IS my intent to justify, as fully as I can, the confidence manifested in me by the Association in electing me its president. How well I shall succeed in this, time will tell.

It is my intent to walk along beside all the members of our organization as we strive together to meet whatever problems that may present during my administration. Many exist now. There will be more.

It is my intent to appreciate more the countless responsibilities of the State Board of Censors and to be sympathetic even when I may not be able to be helpful. I shall certainly never be critical of these servants of the Association who serve far beyond the call of duty, often without thanks.

It is my intent to give unqualified support to the committees of the Association for they are making an invaluable contribution to the program of our organization. Without their unselfish contributions, we would be limping along blindly in a maze of confusing issues and problems. They separate the grain from the chaff, and we are their debtors.

In a word, it is my intent to provide, as far as I am capable of doing so, the leadership the Association expects of me, but I shall have to have the assurance of our members that they are close behind me in all that I try to do.

The presidency of The Medical Association of the State of Alabama is not an empty honor. Its responsibilities are manifold but I face them with confidence knowing I shall not be alone in my efforts to raise the organization we love so dearly to an even higher pinnacle than that which it has occupied before.

I am not unmindful of the fact that I am my county's first president of the Association. That in itself should cause me to bestir myself lest those among whom I have practiced so long might have reason to be disappointed in me. Twenty four counties of the state have furnished the Association

its 89 presidents, and now the twenty fifth finds itself on the roll with the 90th president. Actually there have been 92 administrations, for Dr. Albert Galatin Mabry of Selma served in 1868 and 1869 during the period of the reorganization of the Association following the War Between the States; and the late, much loved Dr. Walter F. Scott of Birmingham bore the responsibilities of the office in 1945 and 1946, the Association being unable to meet in 1945 because of federal edict and World War II.

One does not breathe easily in the presence of all the fine men who have graced the presidency of our organization—21 from Jefferson County, 15 from Montgomery, 13 from Mobile, 6 from Dallas, 5 from Madison, 4 from Tuscaloosa, 3 from Talladega, 2 each from Colbert, Hale, Houston, Sumter and Wilcox; and one each from Barbour, Bullock, Covington, Etowah, Fayette, Lauderdale, Lawrence, Macon, Morgan, Perry, Tallapoosa and Walker—but they are an inspiration. I ask you to help me to be, in some manner, like them.

It is interesting to note that in the group the name of Jerome Cochran, the founder of our organization, does not appear. He had an intent, too, and it was to give Alabama a completely formed medical and public health organization that could stand four-square against any wind that might blow; and it may be assumed that, in devoting his life to perfecting the organization, he did not have time to be its president. "A rough and lack lustre stone, which proved, upon further examination, to be a precious gem of rare value," as he was described to be—he, too, because of the manner of his living, and his contributions to medical and public health organization in Alabama, lends determination to my intent to go the last mile in justifying the confidence shown in me in choosing me president of the Association.

W. R. Carter



ORGANIZATION SECTION



WILLIAM ROBERT CARTER
B. S., M. D., F. A. C. S., F. I. C. S.
Repton
PRESIDENT OF THE ASSOCIATION

Dr. Carter was born in Belleville, Alabama, on September 5, 1900. He attended Repton High School and took his premedical work at the University of Alabama, and received his M. D. degree from Emory University.

Dr. Carter is affiliated with the Monroeville Hospital and the Conecuh County Hospital in Evergreen.

The president is a member of the Repton Baptist Church and has been chairman of the Board of Deacons for twenty years.

Dr. Carter is married to the former Alice Caine of Safford, Alabama. They have four children, one of whom is a physician.

Of all the honors conferred on him professionally, Dr. Carter feels that the responsibility of the office as president of The Medical Association of the State of Alabama is the most challenging. With a feeling of gratitude and humility, he pledges his best efforts as he assumes his office.



MRS. GEORGE WESLEY NEWBURN, JR.

Mobile

PRESIDENT OF THE WOMAN'S AUXILIARY

The newly elected president of the Woman's Auxiliary to The Medical Association of the State of Alabama is Mrs. George Wesley Newburn, Jr. of Mobile.

Mrs. Newburn, the former Dorothy Dee of Birmingham, attended Loulie Compton Seminary in Birmingham, Ward-Belmont College in Nashville, and Birmingham Southern College.

Mrs. Newburn was president of the Woman's Auxiliary to the Medical Society of Mobile County in 1950-51 and 1951-52. She has served as chairman of the State Bulletin and as State Treasurer of the Woman's Auxiliary, and as chairman of the Archives and Exhibits Committee.

The President is affiliated with the Trinity Episcopal Church, Mobile Infirmary Auxiliary, Mobile Opera Guild Auxiliary, and the Joe Jefferson Players.

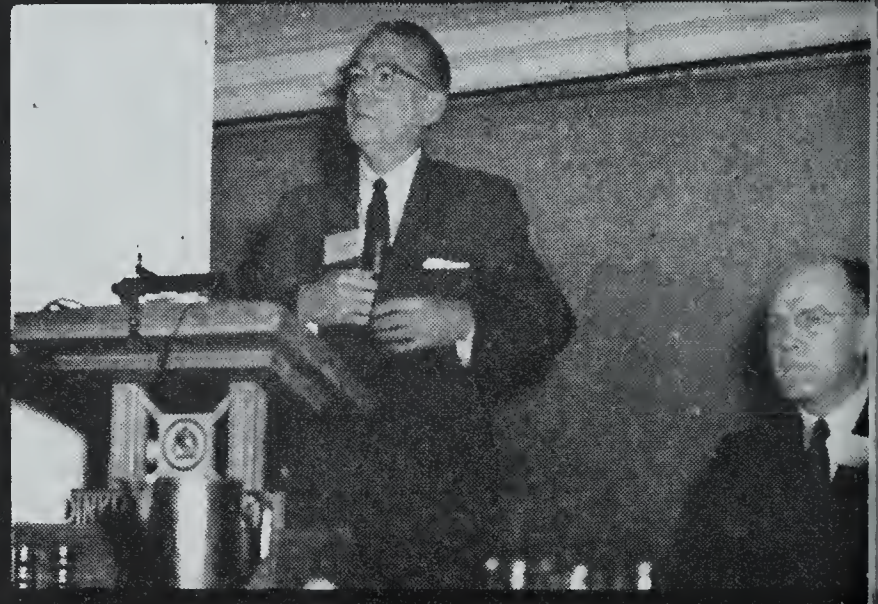
HIGHLIGHTS OF THE ANNUAL SESSION

Counsellors and Delegates of the Association in business session sitting as the Board of Health of the State of Alabama.

Paternal Delegates presented to the 8th annual session of the Medical Association of the State of Alabama.



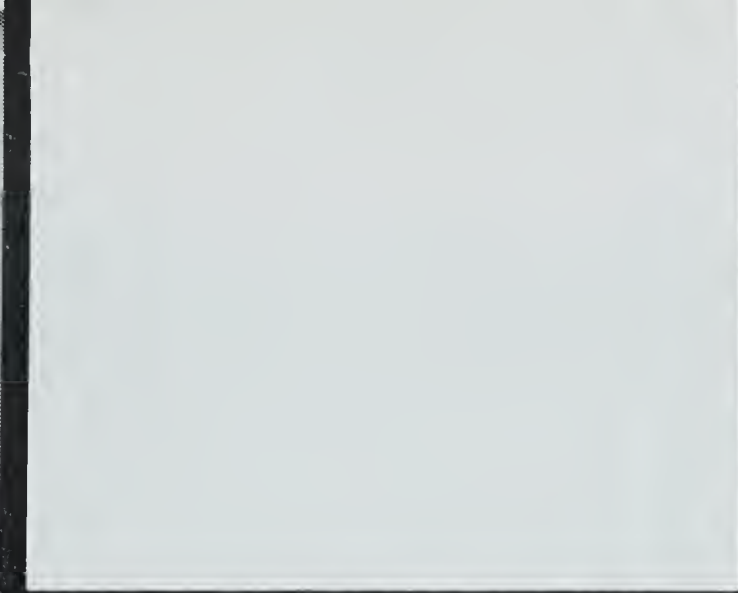
Louis M. Orr, President-Elect of the American Medical Association, was one of the feature speakers at the Friday morning session. Pictured with Dr. Orr is Dr. Edgar G. Givhan, retiring president of the State Association.



In session with the Board of Censors are (left to right): Drs. John W. Simpson; L. Myers; Bernard Sykes, Assistant Attorney General; Drs. D. G. Gill; E. V. Caldwell and G. O. Segrest.



Leo E. Brown, Director of the Communication Division of the American Medical Association, spoke at the Indocrination Seminar on Friday afternoon.



Thirteen members of the Fifty Year Club were present to receive their certificates of distinction. Picture above are left to right (front row): Drs. Daniel Campbell; William M. Carmichael; William H. Abenethy; Walter Fudge; George F. Littlepage; DeWitt Faucett; (second row) Isham J. Kimbell, Sr.; A. L. Staller; David C. Byrne, Jr.; John W. Black; J. C. Anthony; Samuel C. Hammer. Dr. Horace A. Leyden received his certificate with this group but was not present when this picture was made.



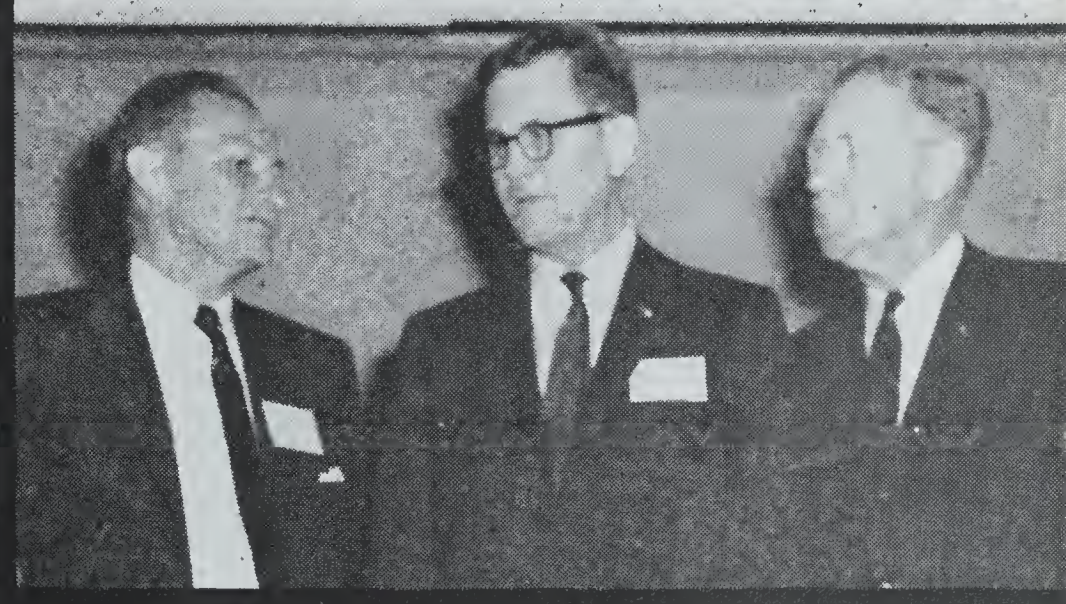
The Second Annual William Crawford Gorgas Award is presented to Mr. Marc Ray Clement (right) by Dr. J. Michaelson. The plaque was awarded to Mr. Clement for his outstanding work in the field of health.

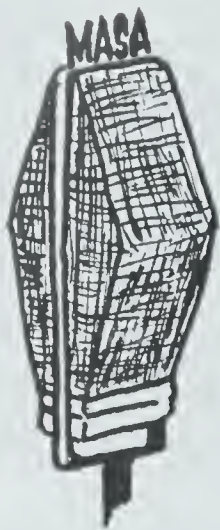


Elected to serve as officers of the Association for the coming year are (left to right) Drs. William R. Carter, President; J. A. Brantley, Vice President; G. O. Segrest, Board of Censors; W. S. Littlejohn, Board of Censors and Hugh E. Gray, President-Elect.

Dr. Gray Dr. Carter Dr. Cannon

Newly elected officers of the Woman's Auxiliary are (left to right) Mrs. J. O. Colley, Jr., Finance Officer; Mrs. Chester Beck, Treasurer; Mrs. J. O. Brooks, Vice President; Mrs. W. L. Smith, Vice President; Mrs. George W. Newburn, Jr., President.





ASSOCIATION FORUM

TRENDS IN DIABETES CONTROL

Forty years ago a medical diagnosis of diabetes was the equivalent of telling a patient he would soon die, according to a recent statement made by George Bugbee, President of the Health Information Foundation.

In most cases, Mr. Bugbee pointed out, the victims were the very young. Nowadays, he said, thanks to insulin and more recent therapeutic developments, a diabetic who receives proper and continuing treatment can look forward to years of almost-normal life.

Today, diabetes is largely a disease of middle and old age. Its importance has grown as medical advances have added to life expectancy, thus creating an ever-larger group of persons with increased susceptibility.

But despite our substantial progress in recent years toward control of diabetes mellitus, this chronic disease remains a major health problem in the United States, he said.

Our recent progress against diabetes is only half the story, he pointed out. Better control of this disease depends more and more on early detection and treatment. And the first step in that direction is for the American public to become convinced that preventive medicine is an essential requirement for health.

However, Mr. Bugbee emphasized, the fight against diabetes has only half begun. In this country today there are about one million known diabetics—plus perhaps another million persons who have the disease but don't know it.

Physicians, he said, emphasize that prospects for greater life expectancy and better health for diabetics depend largely on early diagnosis and treatment. Yet, he continued, if the best available estimates are correct, roughly half of our diabetic population is not getting the care it needs.

Whose fault is this? Mr. Bugbee feels that a large part of the blame seems to lie with the many individuals who still feel that consulting a physician is something to be avoided until the last possible moment. The great majority of the one mil-

lion unknown cases of diabetes could be discovered if Americans were in the habit of visiting doctors periodically in times of good health as well as sickness. Physicians, too, have a responsibility in seeing that their patients have the examinations they need.

One of the basic results of medical progress is that more people are now living to middle and old age. And as people get older, Mr. Bugbee said, they naturally require more medical care. Thus, he pointed out, scientific advances are in themselves a signal for more—not less—treatment and preventive care.

Since 1940, according to the Health Information Foundation, the trend in mortality from diabetes has been downward. Although more people currently have the disease, their mortality is lower and their life expectancy markedly greater than before the introduction of insulin treatment in the early 1920s. Diabetes cannot yet be cured, but medical management of it has advanced to such levels that most diabetics today can lead productive lives. This once-deadly disease has been reduced to the status of a controllable one, and recent developments give promise of greater progress ahead.

In 1957 diabetes caused an estimated 27,000 deaths in this country, or sixteen per hundred thousand population. It accounted for nearly two per cent of the total number of deaths and ranked eighth among the leading causes. Moreover, probably a like number of diabetics died from other causes; and in many of these instances, diabetes was a contributing factor.

In 1900 the death rate from this disease was relatively low, 13.0 per hundred thousand population. Thereafter the rate climbed until it reached a peak at double that level in 1940. Since that time the rate has fallen, but it is still higher than the low levels of early in the century.

More and more, diabetes takes the major portion of its victims at the older ages. Currently mortality during childhood and the teens is very low; it rises after the middle 20s, and after age 45 the rate of increase is particularly rapid. In 1900 mortality for those at age 45 and over was only about

eight times as large as the comparable rate for persons under 45; today this ratio has risen to nearly 40.

With the introduction of insulin, the death rate at ages under 45, which previously had been rising, dropped sharply—from 5.5 per hundred thousand in 1922 to 3.5 two years later. By 1956 the rate had reached 2.1. Within this group, declines have been greatest at ages 5-14.

At 45 and over, even after the beginning of the insulin era, the trend was, until recently, toward increasing mortality. Between 1900-02 and 1946-48, mortality in the age groups 45-54 increased by about 15 per cent; for 55-64 by about eighty per cent; for 65-74 it more than doubled; and for ages 85 and over it actually quadrupled.

Since 1949, however, diabetes mortality rates have decreased even at the older ages (except 85 and over). These decreases would have been greater except for the fact that there is now a rising number of diabetics at the older ages, survivors of those afflicted in former years and subject to an increased risk of mortality from this disease.

Diabetes is today the only major cause of death where female mortality (adjusted for age) is higher than male. This differential has actually widened considerably since 1900, especially at the upper ages. Currently female mortality exceeds that of males at all age groups above 45, with the maximum excess (about 60 per cent) falling in the ages 65-74.

Early in this century, mortality from diabetes was higher for whites than for nonwhite persons. Today, however, the situation is reversed; the excess nonwhite mortality now runs as high as 30 per cent. In 1954-55 the diabetes mortality of nonwhite females exceeded that of white females by about 50 per cent. For males the nonwhite excess was much smaller—only six per cent.

Significantly higher mortality from diabetes is experienced in the northeastern part of the country. For example, the 1955 death rate in the Middle Atlantic states (New York, New Jersey, Pennsylvania) was 17.2 per hundred thousand, about one-fourth above the national average. The lowest rates (9.4 and 9.8) prevailed in the Pacific states (California, Oregon, and Washington) and the East South Central states (Kentucky, Tennessee, Alabama, Mississippi).

Mortality from diabetes also varies significantly with occupation and social class. Recent data from England and Wales indicate a definite downward gradient in mortality among men as socioeconomic level declines. Just the reverse pattern seems to hold true for women.

Thus, among occupied and retired men at ages 65 and over, those in social classes I and II (professional and intermediate occupations) experienced mortality ratios of 30 and 39 per cent, respectively, above the corresponding ratios for men in all social classes. Among the married women in these classes, however, mortality was 35 and four per cent below the average.

While mortality has declined, the estimated number of *living* diabetics in this country has risen appreciably in recent years, from two-thirds of a million known to have the disease 20 years ago to about one million today. This sizable increase is far larger than the comparable population increase over the same period (32 per cent). In addition, it is estimated that perhaps an equal number of persons have the disease but are unaware of it.

About 65,000 persons become diabetic each year, so the current excess of new cases over deaths of all persons with the disease is probably about 15,000 annually. Approximately 4,750,000 persons alive today are potential diabetics—persons who will develop the disease during their lives. Moreover, according to the American Diabetes Association, 40 million persons in this country—nearly one-fourth of the population—are believed to be diabetic carriers in the genetic sense.

Patterns of mortality and morbidity (illness) from the disease are in general similar. For example, the majority of diabetics are females; and prevalence of the disease, regardless of sex, rises sharply with age. Excess female prevalence is relatively greatest at ages above 45. However, the rate of onset of the disease decreases for each sex after a peak in the late sixties, while the case-fatality rate reaches a maximum at 65 and over.

Although the average life expectancy of diabetics has increased spectacularly since the introduction of insulin, it is still considerably below that of the rest of the population. Prior to 1922, few young children with diabetes survived more than one or two years. At age 10, the average life expectancy of diabetics during the period 1897-1913 was 1.3 years, and during 1914-1922 it had risen to 2.6 years.

The introduction of insulin in 1922 improved the situation immensely, and life expectancy for 1922-25 jumped to 14.3 years. The latest statistics, for 1947-51, place life expectancy of diabetics aged 10 to 44.3 years. However, the average remaining lifetime for those afflicted children still lags behind that of the general population by 17 years.

Similarly at ages 30 and 50: life expectancy for 30-year-old diabetics rose from 4.1 in 1897-1913 and 6.3 in 1914-22 to 16.8 in 1922-25 and 30.1 in 1947-51—a momentous gain, but still 12 years behind the

general population. At age 50 the gain was from 8.0 to 9.5 to 12.3 and 16.9 in the corresponding years, while the gap between diabetics and the general population was nearly eight years.

Patterns of deaths by cause among diabetics have come to resemble more and more those of the general population. The majority today are due to the degenerative diseases—which seem to occur more frequently and develop more rapidly in diabetics—involving the heart, blood vessels and kidneys. Diabetic coma and diabetic gangrene, so common and dangerous in the pre-insulin era, are now relatively infrequent as causes of death. Insulin reaction is another increasingly rare cause.

Childbirth and Diabetes

One of the most impressive achievements in the fight against the disease has been to make pregnancy and childbirth among diabetic women relatively safe for both mother and child. Before the introduction of insulin, pregnancy among diabetic women was relatively rare. Very young girls who developed the disease in those days seldom survived to the child-bearing ages; or, if they did, they were very often sterile, as were many who developed it in early adulthood. Even when a pregnancy was achieved, it too often ended disastrously for mother and/or child. For example, fetal mortality rates ranged between 30 and 60 per cent depending on the length of pregnancy observed.

In recent years, however, research in hormone and other forms of therapy has done much to make pregnancy safe for the diabetic. Sterility among diabetics has been reduced. With proper medical supervision, a woman with the disease currently has about an 85 per cent chance of delivering a healthy baby, while her own risk of developing serious complications is very low.

Along these lines, mortality from diabetes mellitus among women seems to be related to their marital status. Prior to about age 45, the diabetes death rate is higher for single women than for those who are now married or have ever been married. At ages 45-54 the relationship is reversed, and the death rate for married, widowed, and divorced women, 15.0 per hundred thousand, exceeds the rate for single women by about one-third. The relative disparity rises with age, exceeding 100 per cent for all age groups between 60 and 74. (Among men, single persons have higher mortality from diabetes than the married, divorced, and widowed combined at all ages under 70.)

Causes of Diabetes

Despite the substantial progress made in treating it, surprisingly little is known about the causes of diabetes mellitus. Most investigators agree

that, while the disease itself is not inherited, a predisposition to it may well be. And today the hereditary factor may be even more important than formerly because of the improved fertility of diabetic women and the increased chances that their children will survive. Family history (patterns of nutrition, etc.) has definitely been implicated as a factor.

Life insurance studies have provided a large and consistent body of data indicating that overweight is reflected in excess mortality from diabetes mellitus. However, no significant relationship has been demonstrated between the quantity of sugar intake and the prevalence of the disease.

The role of nervous strain in the causation of diabetes is more complex. A current hypothesis suggests that the individual's adaptation to the stresses of life may be of great importance in the onset and course of the disease.

Part of the recent increase in the prevalence of diabetes seems due to the sheer aging of the population and the increased life expectancy of diabetics. Other factors sometimes implicated in the increase include our generally higher living standards, increased food consumption, accelerated urbanization and industrialization, and the trend to sedentary occupations.

Probably, too, part of this "increase" is spurious in the sense that improved diagnostic techniques, intensified diabetes-control activities, and a greater public alertness to symptoms, have all resulted in earlier and more intensive case-finding, which in turn adds to the number of *known* diabetics.

Future progress will probably depend on both the more intensive application of already existing knowledge and the discovery of new methods of treatment. A major objective must be early diagnosis and treatment for all diabetics; only in this way can serious complications be prevented.

Medical research has come up with improved insulin and a more recent discovery, a synthetic orally administered compound effective in lowering blood-sugar levels in some diabetics. Currently scientists are studying the possible therapeutic effects of other synthetic compounds. They are also looking into the role of the hormones in regulating body function, and are trying to develop a more sensitive test of susceptibility to the disease. These and other research efforts could lead to the elimination as a cause of death of a disease that a few decades ago was a virtual death sentence.



MEDICAL CENTER NEWS

PROPOSED MEDICAL AND DENTAL LAWS DISCUSSED

Members of the Subcommittee on Health and Welfare, functioning under the State Legislature's Interim Committee on Revision of Laws, held hearings recently with University Medical and Dental School officials.

The officials proposed several revisions for the medical and dental codes to the subcommittee, headed by Rep. Tom Bevill of Walker County.

Dr. Joseph F. Volker, dean of the Dental College, opposed the proposed new dental code to be submitted to the Legislature.

As approved by the State Dental Association, he suggested the code be revised to accomplish the following:

1. Provide certification of graduates. He said he had to close the School of Dental Hygiene last year because the code failed to provide this certification.
2. Remove the five years of practice requirement for dental students to be eligible for membership to the State Board of Dental Examiners.
3. Remove the stipulation barring faculty members of the dental college from membership on the board.
4. Remove the citizenship requirement for licensing in Alabama. This is unreasonable in some instances, he said.

Dr. Robert C. Berson, dean of the Medical College, discussed revisions needed in the medical code.

The State Board of Health submitted a proposal for some small changes in the law on scholarships awarded students of the Medical College.

The legislators introduced a proposal by the State Medical Association for a law on medical licensure, and Dr. Berson heartily approved.

The group toured the medical and dental facilities of the College and also University Hospital.

The legislators also held a hearing with representatives of the Alabama Pharmaceutical Association.

Other members of this subcommittee are Sen. Kyser Leonard, Talladega; Rep. M. B. McLendon, Bullock; Rep. George Bailey, Montgomery, and Rep. H. E. Ray, Winston.

DR. CHURCHILL SPEAKS TO SURGEONS

Dr. Edward D. Churchill, Professor of Surgery at the Harvard School of Medicine and Chief of the Surgical Service at Massachusetts General Hospital, spoke before the Birmingham Surgical Society at the group's 50th Anniversary meeting at the Mountain Brook Club on March 28.

Dr. Churchill is also a visiting professor of surgery at the University of Alabama Medical Center, and remained in Birmingham several days to conduct surgical sessions here.

One of the nation's most distinguished surgeons, Dr. Churchill is the author of more than 75 papers on various aspects of surgery. He is a member of a number of surgical societies.

Serving in World War II with distinction, he was the recipient of four Bronze Star Medals, the Legion of Merit Order, the Legion of Honor and the British Empire Service Medal. Born in Chenoa, Illinois, he was graduated in medicine from Harvard.

UNIVERSITY BLOOD BANK RANKS HIGH IN NATION

University Hospital and Hillman Clinic ranked 18th in the nation in the number of blood transfusions performed during 1958. During this period, 8,812 transfusions were administered by the University Hospital's blood bank.

The Joint Blood Council's report shows that 22,000 hospitals throughout the United States participated in this program. According to the report, most hospitals with a higher rate of transfusions performed were equipped with 800 to 1,000 beds, as compared to Alabama's 600.

Matthew F. McNulty, Administrator of the University Hospital, said this record of service is even more remarkable in the light of the inadequate space in which our blood bank is housed.

The report showed, however, that University Hospital ranks 28th in the nation and eighth in the southeast in total volume of services performed.

HISTORY OF MEDICINE TELEVISED

Four television programs depicting the history of medicine were recently televised in the Birmingham area over Channels 2, 7 and 10 by the Medical Center.

The programs were produced jointly by the Medical Center and the Alabama Society of Medical History under the direction of J. Morgan Smith, Public Information Coordinator for the Medical Center.

The first program featured Dr. E. B. Glenn, president of the Alabama Society of Medical History, and Mrs. Mildred Whatley, research technician, in a discussion on the lecture notes of William McCants, medical student, 1856.

Highlights of gynecology were discussed on the second program by Dr. Buford Word, Assistant Professor of Gynecology of the Medical Center.

Medical history of the War Between the States was outlined on the third program by Dr. John J. Sharry, Associate Professor of Dentistry, and by Dr. William Buck, Assistant Professor of Clinical Dentistry.

The last program in the series was devoted to Charles Darwin and evolution. Miss Martha Jo Jackson, graduate student in anatomy; Dr. Carl Sensenig, Professor of Anatomy; and Dr. Benjamin C. Moffett, Jr. of the University of Alabama Medical Center participated in this program.

CARR NAMED COORDINATOR OF HEALTH FAIR

John H. Carr, Director of the Jefferson County Health Council and Assistant Director of the County Coordinating Council, has been appointed coordinator of the Jefferson County Health Fair, scheduled here May 15, 16 and 17.

The announcement of Carr's appointment came from Dr. Richard T. Eastwood, Health Fair Chairman.

"The enthusiasm already evidenced by forces in this community for the county's first mammoth health fair has made it necessary to name a man who can coordinate all its activities," Dr. Eastwood said.

The Fair, which will incorporate virtually every phase of health and medical activity in the area, will be held at the Municipal Auditorium, according to Dr. Eastwood.

Some 70 health exhibits will be shown the public, he said. These range in size from the spectacular exhibit of the American Medical Association to those of local agencies and institutions. One exhibit that will be of interest to the public is The Medical Association of the State of Alabama's exhibit on dieting.

KOREAN DENTAL CARE

Koreans take better care of their teeth than Americans do, according to Dr. Choon Gun Rhee, who has just completed a year's study in the field

of oral surgery at the Medical Center under the auspices of the International Cooperative Administration.

Koreans, he said, wash their mouths out well with water after eating, and they don't consume nearly so many sweets as Americans do.

Another thing Dr. Rhee feels that contributes to the health of his people is their diet, which he said consists largely of vegetables and seaweed. Seaweed, he explained, contains many vitamins and minerals, including iodine, and even has certain medicinal benefits. In his country, he said, a seaweed syrup is given to women after childbirth to guard against infection.

If Dr. Rhee's own perfect set of teeth—sparkling white, even and well cared for—are any indication, his contention is not hard to believe.

Dr. Rhee finds American methods and equipment in dentistry quite advanced, and hopes to help his people with the knowledge he has gained here.

As for American customs, Dr. Rhee said he has been greatly impressed with the way so many American women work in order that their husbands can finish their schooling. In Korea, he said, only professional women work after they get married. However, Dr. Rhee hopes to persuade his wife into working in his office when he returns home.

DONATION ANNOUNCED

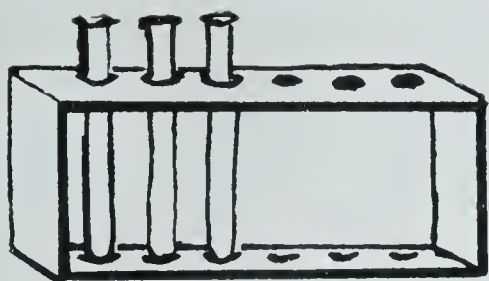
A donation of three hundred dollars by Mrs. Lee Moody to the University of Alabama Medical Center's Department of Ophthalmology has been announced by officials of the Medical College of Alabama and University Hospital and Hillman Clinic. The money will be added to previous contributions and is to be used in investigative work into eye diseases, dealing with both causes and treatment.

Officials pointed out that donations of this type make possible research which may lead to discoveries which will be of benefit to many of our citizens.

Two out of 3 tuberculosis victims are men, according to the publication, *Patterns of Disease*, prepared by Parke, Davis & Company for the medical profession.

It discloses that the sex ratio of mortality from the disease has reversed during the past century. Whereas tuberculosis death rates in the 19th century were considerably higher among women, they are presently much higher among men. Reactivation of the disease is also more common in men.

The publication notes, too, a changing age pattern in the disease. At present most reported cases of TB are among persons in the productive age groups, but the disease is increasingly becoming a disease of older persons.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

HOSPITAL SERVICE FOR THE INDIGENT

The Hospital Service for the Indigent Program, established by legislation enacted during 1957 and designed to provide hospitalization for acutely ill or injured Alabamians who can be markedly helped by treatment in a hospital but are unable to bear the cost of such treatment, has just completed its first full year of operation. Treatment of certain chronic illnesses and permanently disabling illnesses and diseases is excluded under the law.

The plan is administered by the State Board of Health through the State Health Department. County health departments have no direct responsibilities in connection with it. All counties are eligible to participate. Any county wishing to do so must certify in writing to the State Board of Health not later than January 1 each year that it desires to participate during the current fiscal year. The county has its choice of participating either to a limited extent by accepting only the non-matching funds available to it or fully by matching additional funds provided under the law.

The law (Act 394, 1957) provides that 25 per cent of the appropriation of \$95,000 per annum for the first two years shall be apportioned in equal parts among the 67 counties of the state. Each county could have received \$354 for the current fiscal year merely by qualifying with a request in writing before January 1, 1959. Sixty Alabama counties have qualified for these funds for the current year. Only 51 counties received such funds during the first year.

Seventy-five per cent of the appropriation is apportioned among the counties in the proportion which the population of the county bears to the total population of the state according to the last federal census. In order for a county to qualify for these funds, its governing body is required to match dollar for dollar all or a portion of the amount allotted to the county. Fifty-three counties qualified for these matching funds for the current year. The law provides for redistribution of unclaimed funds in both categories after January 1 of the fiscal year.

Patients accepted for care under this program receive treatment only in hospitals which have qualified to participate. Any hospital, regardless of ownership, which is licensed under the laws of

the state, has ten or more beds, and is not operated primarily for the care and treatment of tuberculosis, mental disorders or any other such chronic disease or illness may apply for approval as a participating hospital. (The hospital does not have to be located in a county which is participating in the program, nor do patients have to be hospitalized in the county in which they reside.) The applying hospital must furnish proof of the non-profit basic per diem cost of hospitalization during the preceding fiscal year of the hospital, or an agreement in writing to accept a flat rate of \$10 per patient day or the actual cost of hospitalization, whichever is the lesser. These hospitals agree to complete the necessary treatment and discharge the patient in the minimum number of days consistent with good medical care. Payment is made to the hospitals by the State Health Department upon receipt of properly executed forms prescribed by the State Board of Health.

The program has the full support of the Alabama Hospital Association. Eighty hospitals have qualified to participate in the program during the current year.

Determination of eligibility of individuals to receive benefits under this program is the function of an admissions committee in each county. The admissions committee is appointed by a board whose composition is set forth in the law. Any person desiring hospitalization under the program must make application to the appropriate admissions committee through his physician. The admissions committee has sole authority to decide who shall be approved for service from its county; however, final determination of the need for hospitalization of any person is made by the medical staff of a participating hospital.

Fifty-three counties have qualified to receive both matching and non-matching funds for the current fiscal year. Amounts originally allocated for the year ranged from \$630 for Coosa County to \$13,623 for Jefferson County. If Coosa County provides matching funds for its total allotment under the matching category, the county will have \$906 available for hospitalization of the medically indigent during this year. This figure includes the sum of \$354 which does not have to be matched. The amount available to Jefferson County will be \$26,892. These amounts do not include the unclaimed funds which are being redistributed.

During the calendar year 1958, 570 patient admissions were recorded with an average hospital

stay of 9.7 days and an average claim of \$177.53. Fifty-eight per cent of the patients were white, 42 per cent colored; 58 per cent were female, and 42 per cent male. Age distribution of patients was fairly uniform, covering all ages from 1 to 92 years. One-fourth of the patients were over 65 years of age.

Diseases of the digestive system led the list of admission diagnoses with 18 per cent. Diseases of the circulatory system accounted for 12 per cent. Nine per cent of the admissions were for delivery, complications of pregnancy, childbirth and puerperal care. Diseases of the respiratory system comprised 8 per cent and diseases of the heart 7 per cent.

This program is offering a much-needed service to the citizens of Alabama. The only major complaint about it has been that it is not nearly extensive enough. There is no doubt that there are far more than 570 persons in the state who urgently need the hospital care allowable under the provisions of the plan but who cannot afford to pay for such care themselves. Since hospitals cannot furnish such care without expense, funds for the care of the medically indigent must come from some source. There is a definite need for additional funds for this service. The Legislature has been requested to increase the appropriation for the next two fiscal years to \$600,000 per annum. Experience gained in the two years of the program's existence indicates that this is the minimum amount needed to provide a more adequate program of hospital care for medically indigent persons. If this amount is appropriated, the total funds available will approximate one million dollars which would serve between five and six thousand patients.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director
SPECIMENS EXAMINED

March 1959

Examinations for diphtheria bacilli and Vincent's	45
Agglutination tests	578
Typhoid cultures (blood, feces and urine)	556
Brucella cultures	2
Examinations for malaria	21
Examinations for intestinal parasites	5,525
Darkfield examinations	9
Serologic tests for syphilis (blood and spinal fluid)	26,151
Examinations for gonococci	1,784
Examinations for tubercle bacilli	3,972
Examinations for Negri bodies (smears and animal inoculations)	310
Water examinations	2,163
Milk and dairy products examinations	4,371
Miscellaneous examinations	943

*Total 46,430

*This includes 1,789 specimens examined in the Dothan Laboratory during the month of February but the report was not received in time to be included in our February report.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. SMITH, M. D., Director
CURRENT MORBIDITY STATISTICS

1959

	Feb.	Mar.	E.E.* Mar.
Typhoid and paratyphoid	2	0	3
Undulant fever	0	1	1
Meningitis	10	11	17
Scarlet fever	99	171	44
Whooping cough	28	27	54
Diphtheria	1	0	9
Tetanus	1	1	2
Tuberculosis	186	199	195
Tularemia	1	1	2
Amebic dysentery	1	0	2
Malaria	0	0	0
Influenza	127	219	2764
Smallpox	0	0	0
Measles	337	673	761
Poliomyelitis	1	0	3
Encephalitis	1	2	2
Chickenpox	191	346	396
Typhus fever	0	0	1
Mumps	99	57	285
Cancer	396	389	395
Pellagra	0	0	0
Pneumonia	270	246	358
Syphilis	89	128	199
Chancroid	2	3	7
Gonorrhea	217	326	303
Rabies—Human cases	0	0	0
Positive animal heads	26	28	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.



BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR 1958 AND COMPARISONS

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Recorded			Rates		
	1958 Prov.	1957 Final	1952-1956 Average	1958 Prov.	1957 Final	1952-1956 Average
Live births	81686	83394	82557	25.6	26.3	26.0
Deaths	29231	28269	26685	9.2	8.9	8.4
Fetal deaths	1742	1749	1905	20.9	20.5	22.6
Infant deaths—						
under one month	1886	1860	1887	23.1	22.3	22.9
under one year	2892	2681	2759	35.4	32.1	33.4
Maternal deaths	70	72	105	8.4	8.4	12.4
Cause of Death						
Tuberculosis, 001-019	366	311	425	11.5	9.8	13.4
Syphilis, 020-029	86	69	90	2.7	2.2	2.8
Dysentery, 045-048	11	17	21	0.3	0.5	0.7
Diphtheria, 055	4	6	15	0.1	0.2	0.5
Whooping cough, 056	6	2	14	0.2	0.1	0.4
Meningococcal infections, 057	20	22	30	0.6	0.7	0.9
Poliomyelitis, 080, 081	8	7	22	0.2	0.2	0.7
Measles, 085	12	15	16	0.4	0.5	0.5
Malignant neoplasms, 140-205	3549	3502	3206	111.2	110.3	101.2
Diabetes mellitus, 260	406	349	322	12.7	11.0	10.2
Pellagra, 281	12	20	20	0.4	0.6	0.6
Vascular lesions of central nervous system, 330-334	4022	3917	3426	126.0	123.3	108.1
Rheumatic fever, 400-402	20	38	47	0.6	1.2	1.5
Diseases of the heart, 410-443	9546	9293	8422	299.0	292.6	265.8
Hypertension with heart disease, 440-443	1786	1737	1885	55.9	54.7	59.5
Diseases of the arteries, 450-456	692	632	497	21.7	19.9	15.7
Influenza, 480-483	274	268	231	8.6	8.4	7.3
Pneumonia, all forms, 490-493	950	799	856	29.8	25.2	27.0
Bronchitis, 500-502	64	55	49	2.0	1.7	1.5
Appendicitis, 550-553	30	43	42	0.9	1.4	1.3
Intestinal obstruction and hernia, 560, 561, 570	134	150	136	4.2	4.7	4.3
Gastro-enteritis and colitis, under 2, 571.0, 764	140	140	147	4.4	4.4	4.6
Cirrhosis of liver, 581	183	184	150	5.7	5.8	4.7
Diseases of pregnancy and childbirth, 640-689	70	72	105	8.4	8.4	12.4
Congenital malformations, 750-759	388	416	361	4.7	5.0	4.4
Immaturity at birth, 774-776	568	637	643	7.0	7.6	7.8
Accidents, total, 800-962	1974	1983	1910	61.8	62.4	60.3
Motor vehicle accidents, 810-835, 960	901	957	872	28.2	30.1	27.5
All other defined causes	4529	4295	4417	141.9	135.2	139.4
Ill-defined and unknown causes, 780-793, 795	1167	1027	1065	36.6	32.3	33.6

Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

AMERICAN MEDICAL ASSOCIATION NEWS

CHILD'S ELBOW MAY BE INJURED BY SUDDEN JERK OF HAND

A sudden jerk on a small child's hand, which lifts him off his feet, may injure his elbow, according to a North Dakota orthopedist.

The injury, first described in 1671, is sometimes called "nursemaid's elbow." Actually it is a dislocation of the upper end of the radius, the long flat bone on the inside of the forearm. The radius, being directly fixed to the bones of the hand, is pulled out of the ligaments at the elbow.

According to Dr. George M. Hart, Northwest Clinic, Minot, N. D., the injury usually occurs in children between the ages of two and four years and rarely after the age of six.

Writing in the April 11 Journal of the American Medical Association, he reported seven cases of the injury. They had occurred in several ways—when the child rolled on the arm, when a cousin twisted the child's arm, and when the child fell on the arm. The most common means of injury, however, is when the child's hand is jerked and he is pulled off his feet.

After injury there is pain in the region of the elbow, the child refuses to use the arm, and he holds the elbow slightly bent and the forearm with the palm turned down.

The treatment is simple, Dr. Hart said. The affected elbow is grasped with one hand with the thumb on the head of the radius. The forearm is held with the opposite hand at the wrist and extended.

The forearm is then forcibly turned so the palm faces upward and at the same time slight pressure is applied at the radius head with the thumb. Upward pressure may be made on the forearm so that the radius is pushed upward. As the manipulation is carried out, a slight click is often felt over the head of the radius and pain and limitation of movement are relieved.

"Reduction is usually so easy that it may occur spontaneously," Dr. Hart said, "or may be accomplished by the parent or x-ray technician during manipulation of the arm."

After the bone is back in place, the arm should be put in a sling for a few days and care should be taken that the child's forearm is not pulled, he said.

NEW OPERATION DEvised FOR CORRECTING "LOP" EARS

The only way an "outstanding ear" can be made less prominent is by taking the spring out of the cartilage that provides its skeleton, according to a Boston ear, nose, and throat specialist.

Cartilage is "nearly a perfect spring in that it may be bent for long periods of time, but once the force which holds it is released it will spring back to its former shape," Dr. Edgar M. Holmes said.

Any procedure to alter the shape of a "lop" ear must first "remove the temper of the cartilage before it will remain in its new position," he said. A number of procedures have been used, but most of them present such varying difficulties as scars or ugly creases in the skin of the back of the ear.

Dr. Holmes, however, has developed a new surgical procedure that seems to work better than the older methods. He described it in the April Archives of Otolaryngology, published by the American Medical Association.

In the operation, the skin on the back of the ear is folded back, exposing the cartilage. A row of small cuts from top to bottom is made in the part of the ear nearest the head. Following this more rows of tiny cuts are made, overlapping each other, until the entire area to be bent is covered. This gives the appearance of fish scales or shingles on the roof, and also breaks the spring of the flat surface which is to be bent.

When the spring has been sufficiently broken, the ear will remain nearly in its new position without holding it, Dr. Holmes said. When the ear is in its correct position, there is a small amount of excess skin, which is removed before the skin is closed.

A pressure dressing is applied and left in place for a week, when the stitches are removed.

The new technique permits the bending of a malformed ear to a more normal position without creating secondary undesirable deformities or irregularities, Dr. Holmes said.

VALUE OF UNSATURATED FATS DEPENDS ON REST OF DIET

Vegetable oils will produce a lowering of the blood cholesterol levels only when combined with a diet that is sharply limited in the use of saturated

or "hard" fats, three New York researchers said recently.

The addition of unsaturated fats to the diet has frequently been suggested as a way of reducing blood cholesterol levels and thereby perhaps helping to prevent heart disease.

However, unsaturated fats will not help unless the diet is restricted in saturated fats, such as beef fat, according to Dr. Richard Perkins, Dr. Irving S. Wright, and Barbara W. Gatje, B. S., of the vascular section of the New York Hospital-Cornell University Medical College department of medicine.

Writing in the April 11 Journal of the American Medical Association, they reported giving two types of unsaturated fats—safflower oil and corn oil—to 22 medical students for periods of seven weeks.

The students followed their normal diets with the addition of the vegetable oils. The oils also contained pyridoxine (Vitamin B6) which is thought to be involved in fat metabolism.

As had been the case in previous studies, there was a considerable variation from week to week in the cholesterol levels of individuals, the researchers said. There was a slight downward trend in the levels, but at no time was the decrease statistically significant.

"There is little doubt," the researchers said, "from the reports of other experimenters that the use of either corn oil or safflower oil, substituted for most of the fat in the diet, will produce a significant decrease in serum cholesterol levels.

"But in this study, the results of the use of these oils as supplements to a regular diet were not significant enough to justify this as a therapeutic procedure."

In conclusion, they said, "Significant results should not be expected from the use of corn oil or safflower oil, even with the addition of pyridoxine, as a supplement to the usual American diet. . . . This study reemphasizes the fact that, if one wishes to produce a significant lowering of the serum cholesterol level, unsaturated fats should be used only when combined with a diet which sharply limits the use of saturated fats."

UNUSUAL SKIN DISEASE REPORTED BY BOSTON DERMATOLOGIST

An unusual skin disease—sweat band dermatitis—has been reported by a Boston dermatologist in the April 11 Journal of the American Medical Association.

Dr. George E. Morris, a member of the A. M. A. Committee on Occupational Dermatoses, said sweat band dermatitis has not been reported recently in the United States because tanning materials containing chrome—a common cause of such skin disorders as shoe leather dermatitis—are not used in the preparation of sweat bands.

However, Dr. Morris has seen three cases of sweat band dermatitis in recent months. One resulted from a sensitivity to chrome, but not because it was present in the sweat band.

The man worked in a tannery. He was sensitive to tanning substances and had a rash on hands, arms and other parts of the body that were in contact with the tanning solution. He developed the sweat band dermatitis because he had been wiping the perspiration off the sweat band with his hands, which were contaminated with the tanning solution.

The other two cases were not related to tanning substances. One man was sensitive to the material used to "finish" the paper sweat band of a painter's cap. The other was sensitive to the oil used in the ropes with which he worked. The sweat band dermatitis developed when he wiped the sweat band of the cap with his hands which were contaminated with the oil.

Dr. Morris noted in conclusion that sweat band dermatitis is usually caused by a finishing agent for paper or synthetic fibers or by substances rubbed onto the sweat band by the hands.

COLD VACCINE PREDICTED WITHIN 24 MONTHS

A vaccine which will prevent from 60 to 70 per cent of all common colds will probably be available within the next 24 months, an expert in cold research has predicted.

"I realize that I have stuck my neck out," Dr. Thomas G. Ward, professor of virology at Notre Dame University, South Bend, Ind., said. However, he believes that a vaccine can be developed against "an acceptable proportion of the common colds."

In an interview, reported in the April Today's Health, published by the American Medical Association, Dr. Ward said he does not believe that common colds will be wiped out, even with an adequate vaccine.

"People are not going to take the vaccine, just as they are not taking polio vaccine . . .," he said. "People are people and we have great difficulty in selling preventive medicine. The prevention of disease is not as glamorous or as consuming to the individual as his actual illness."

From 75 to 80 per cent of common colds are caused by a group of viruses or a group of ordinary bacteria of the streptococcus type, Dr. Ward said. Others may be allergy-symptom colds or psychosomatic.

Viruses are protein substances that cannot be seen, even through a microscope. While related to the one-celled bacteria, viruses are not considered to be living bodies in themselves; they have the peculiar ability to live only in the presence of growing material. In addition to colds, they cause such diseases as measles, chickenpox, poliomyelitis, and rabies. Vaccines composed of dead or "tamed" viruses may be injected into the body and cause it to develop resistance against invasions by the viruses.

Dr. Ward defined a common cold as one wherein the individual has a runny nose two days in succession. This is the nasal type cold which causes the lining of the nose to become reddened and inflamed. No fever is associated with it and it is the kind that may be spread easily to other people.

There is no drug now on the market that could be termed effective against common cold viruses. Colds caused by bacteria may respond to antibiotics and allergy-caused colds may respond to antihistamines.

Until an effective cold vaccine is developed, about the only way to keep from catching cold, according to Dr. Ward, is to "follow the usual health measures such as keeping warm and dry, and well-fed. If possible stay away from those who have colds."

TOY BALLOONS USED TO STOP GASTRIC BLEEDING

Toy balloons in the hands of skilled physicians are now saving the lives of persons suffering from massive stomach hemorrhages.

Writing in the April 4 issue of the Journal of the American Medical Association, four physicians from the University of Minnesota Medical School at Minneapolis reported that they have used the ordinary dime store rubber balloons successfully to stop duodenal ulcer bleeding in nine patients without recourse to surgery.

The technique, based on exhaustive preliminary research with animals, is comparatively simple. The empty balloon, wrapped about the end of a long tube, is passed into the patient's stomach and inflated. With the aid of an intricate machine, a cooling solution, consisting of equal parts of ethyl alcohol and ice-cold water, is circulated through the balloon. Constant temperature and circulating volume is controlled by the machine.

The cooling, which has been carried out in anesthetized animals for 48 hours and in man up to 125 hours, virtually stops gastric digestion and, in turn, also stops the hemorrhaging. As soon as the bleeding appears to be stopped, the machine is shut off, the balloon deflated and removed from the stomach, and the patient is carefully watched for a recurrence of symptoms.

The doctors—Owen H. Wangensteen, Harlan D. Root, Peter A. Salmon, and Ward O. Griffin, Jr.—said that from their observations the gastric cooling technique "holds promising therapeutic value in the management of massive hemorrhages from peptic-ulcer-linked conditions of the duodenum, the stomach and the esophagus."

Altogether the cooling procedure has been used so far on 19 patients with different types of gastrointestinal bleeding. The majority of patients were in shock despite blood transfusions and their conditions were too poor for emergency surgery. Fifteen of the 19 patients required no further treatment.

ANTIBIOTICS SHOULD NOT BE USED IN COSMETICS

The inclusion of antibiotics in cosmetics is opposed in a report of the American Medical Association.

There is no evidence that "constant degerming" of the skin, such as would be presumed to occur with the use of antibiotics in cosmetics, is "necessarily always or even frequently desirable," according to the report appearing in the April 4 A. M. A. Journal.

The report was written by two New York dermatologists, Drs. Carl T. Nelson and Marion B. Sulzberger, for the A. M. A. Committee on Cosmetics.

Antibiotics are now being used in deodorants to help kill bacteria and thus reduce odor. They have also been suggested for inclusion in face creams and in blemish lotions, according to Veronica L. Conley, Ph.D., committee secretary.

In a note, Dr. Conley said, "The persistent trend toward the incorporation of pharmacologically active ingredients into cosmetics has caused growing concern among the medical profession. . . . Medical experience provides considerable evidence of the health implications in the widespread, prolonged or indiscriminate use of antibiotics."

There is essential agreement, the report said, that antibiotics generally useful in the treatment of systemic infections should not be used in cosmetics. However, it has been proposed that cer-

tain other antibiotics (bacitracin, neomycin, polymyxin, and tyrothricin) be permitted in cosmetic preparations.

Even these, which are rarely used other than on the skin, carry certain dangers, according to the report. Some persons may be sensitive to the drugs and develop allergic reactions from continued contact. In addition, little information is available about the possibly harmful effects of the various antibiotics after absorption through the skin.

The possibility of bacteria becoming resistant to the effects of the antibiotics may be increased through prolonged use of the drugs. This would mean that when the drugs must be used to treat a disease caused by a resistant strain of bacteria, they would be ineffective.

In conclusion, the report said, "Except for the deodorant action of such agents in reducing axillary odors, their incorporation in cosmetics has not been proved to be of specific value, and their widespread use in cosmetics could well represent an increased risk to general public health as well as to certain hypersensitive individuals."

FASHIONABLE CLOTHING DESIGNED FOR PHYSICALLY HANDICAPPED

Physically handicapped persons can now buy clothing specially designed to combine fashion and function.

The clothing was designed at the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, after consultation with Mrs. Helen Cookman, a fashion designer.

Physically handicapped persons have specific clothing problems, Dr. Howard A. Rusk and Eugene J. Taylor of the New York University-Bellevue Medical Center explained in the April 4 Journal of the American Medical Association.

They need clothing designed to permit greater ease in dressing with their limited muscle strength or range of motion. The fabric must also be strong enough to withstand the undue wear caused by friction from crutches or wheelchairs and by the strenuous activity required by handicapped persons in dressing. In addition, the clothes should be fashionable enough to permit greater social acceptance and increased self-esteem by the disabled persons, Dr. Rusk said.

Of 17 items designed so far, six are now on the market. These include slacks for men and coat-dresses and suit-dresses for women. The clothes

for women are especially designed to counteract the destructive effect of crutch-walking.

Fabrics are mostly wash-and-wear nylons and dacrons, stitched with the strongest threads available, but care has been taken that the fibers do not generate too much electrostatic charge and will not cause wheel chair problems by sticking instead of sliding. Emphasis was also given to the use of closures which can be easily managed.

The clothing is being produced by a new, non-profit organization, Clothing Research, Inc. It is conducting a market test through direct mail selling. If the market test indicates a sufficient market for the clothing, additional garments will be produced and will be distributed through normal commercial channels, Dr. Rusk said.

Specific information about the clothing may be obtained from Clothing Research, Inc., 307 W. 38th St., New York 1.

NEW RAUWOLFIA PREPARATION CAUSES FEW SIDE EFFECTS

A new derivative of rauwolfia, the old Indian snake root remedy, has been found to lower high blood pressure without producing the many adverse side effects caused by other rauwolfia preparations.

The new drug, called syrosingopine (Singoserp), was discussed in the April 4 Journal of the American Medical Association by four Galveston, Texas, physicians.

They gave the drug to 77 patients with essential hypertension at the University of Texas Medical Branch.

The chief advantage of syrosingopine over other rauwolfia derivatives, such as reserpine, is the relative infrequency with which it produces disturbing side effects, the doctors said. These include drowsiness, terrifying nightmares, depression, nasal congestion, and gastrointestinal disturbances.

Fourteen of the patients were markedly intolerant to other rauwolfia preparations, but only four of these showed any signs of intolerance to syrosingopine and these were relatively minor.

The doctors—George R. Herrmann, Elmer B. Vogelpohl, Milton R. Hejtmancik and James C. Wright—recommended the use of syrosingopine for those patients with essential hypertension who are unable to take the other rauwolfia preparations.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 28

June 1959

No. 12

ADVANCES IN CATARACT SURGERY

WITH PARTICULAR REFERENCE TO A NEW TECHNIQUE OF
SUBLUXATION AND TO ENZYMATIC ZONULOLYSIS

GEORGE M. HAIK, M. D.

New Orleans, Louisiana

GENERAL CONSIDERATIONS

Three major problems confront the surgeon in every proposed operation for senile cataracts. The first is the general status of the patient. The second is the timing of the operation. The third is the selection of the procedure.

Although cataracts occur chiefly in older persons, the age of the patient is not, in itself, a factor of great importance. It is his systemic status, particularly his cardiovascular status, which determines the safety of surgery in the particular case.

This is an elementary consideration, which no competent ophthalmologist would disregard. I shall not go into detail about it, but I do want to stress its importance. Disastrous consequences may follow carelessness in this regard. A patient who is to undergo cataract surgery should have a careful physical examination by a competent internist, and whatever systemic disease is previously known to exist or is detected at this examination should be treated until the internist pronounces him fit for surgery.

As a general principle, the decision when to operate for cataract depends upon the variety of cataract with which one is dealing:

In senile cataract the most favorable time for surgery has arrived when the patient evidently needs it; that is, when he can no longer get about comfortably and is handicapped in his usual operations. Formerly, it was necessary to wait until the cataract had become mature, which meant until the patient had lost all useful vision, before surgery was undertaken. When the extracapsular

sular technique was the only method of removing the lens, operation was not practical until the lens cortex was soft, so that all lens material could be readily washed from the eye and the small, hard, lenticular nucleus could be delivered. With the development of the intracapsular technique, the visual needs of the patient rather than the precise maturity of the cataract set the time for surgical intervention.

If the cataract is monocular, there is sometimes a temptation to postpone operation. The temptation should be resisted. Delay is not wise for three reasons: 1. Binocular vision is safer and more efficient than monocular vision. 2. The longer the operation is deferred, the more advanced is the age of the patient, and, as just intimated, the more likely are systemic diseases and their complications to be present. 3. The sooner the operation is performed, the less is the risk of the complications often associated with cataract, chiefly secondary glaucoma and iritis arising from hypermaturity. This is the most important reason of all for prompt surgery.

If the cataract is bilateral, the question of operation on the second eye arises after operation on the first. Again, particularly when a good result has been obtained, there is sometimes a temptation to let well enough alone. This is another temptation which should be resisted. In my own opinion, the second operation is mandatory. Unless some serious contraindication to surgery has developed, extraction of the second cataract should not be unduly delayed, if only to avoid the risk of secondary glaucoma and the other complications which may arise from hypermaturity.

Selection of Operation.—The extracapsular technique of cataract extraction, although it has been largely supplanted by the intracapsular tech-

From the Department of Ophthalmology, Louisiana State University School of Medicine.

Read before the Alabama Academy of Ophthalmology and Otolaryngology, Point Clear, February 13, 1959.

nique, still has a special field of usefulness and should not be completely discarded. It is preferred by many ophthalmologists in the management of hypermature cataracts with liquid cortical material; in cataracts in which the vitreous is fluid; and in cataracts associated with an old iridocyclitis with adhesions. Others prefer it to the intracapsular technique when the eyes are prominent, when the patient is temperamentally difficult to handle, or when anesthesia is not satisfactory. Whenever there is a narrowing of the chamber angle when the eye is opened, the use of the extracapsular technique may prevent loss of vitreous that is already bulging forward.

In a deliberately planned extracapsular extraction, the very thin posterior capsule which is left in situ may act as a stay against any loss of vitreous during operation. The thin residual capsule often permits better vision than is achieved when there is direct contact of the vitreous with the iris or when opacification and thickening of the cornea are the result of vitreous adhesions.

When the intracapsular operation is employed, the entire lens is removed within its capsule and no particle of lens material is left behind to cause inflammation and swelling and thus lay the groundwork for iridocyclitis and secondary glaucoma. The incidence of both these postoperative complications has been greatly reduced since this new technique has been employed.

Both operations have their disadvantages. Even when the extracapsular technique is employed on strict indications, the remaining posterior lens capsule may become opaque and a second operation, to incise the occluding membrane, may be necessary to clear the pupillary area.

The intracapsular technique has resulted in more frequent loss of vitreous, an extremely serious complication which is always an invitation to retinal detachment. Any disruption of the anterior vitreous face as a result of added pressure during the operation may allow the vitreous free access to the iris, with subsequent inflammation, direct blockage of the chamber angle, and the formation of corneal adhesions. The subsequent corneal clouding may greatly reduce vision.

TECHNICAL ADVANCES

Though there have been numerous technical advances in cataract surgery in recent years, local analgesia remains the mainstay in most operations. General anesthesia is not desirable for a number of reasons. A number of important refinements, however, have been added to the former rather crude methods of achieving local analgesia.

The use of sutures in cataract surgery is a fairly new development. Formerly, the lids were merely closed over the wound and the patients had

to submit to long periods of hospitalization and almost as long periods of absolute immobility. Even with these precautions, intraocular complications were fairly frequent. Quite as important, the psychologic and systemic complications which arise from prolonged immobility in older patients were always serious and sometimes disastrous. The new sutures are of strong, very fine material and are used with small, very sharp needles. They are highly effective, and, as a result of their use, the incidence of intraocular complications after cataract surgery has been greatly reduced, while much earlier ambulation, with its subsequent psychologic and physical benefits, is now possible.

As time passes, all of us tend to develop our own special tricks. One thing that we have found very useful is an extension of the well known use of the Hague lamp to detect lens remnants in the eye when the capsule has ruptured in the course of the extracapsular operation. In the intracapsular technique, it is often difficult to grasp the capsule, and one is often uncertain whether or not it has been grasped. If the Hague lamp is used at this stage of the operation, this particular problem is promptly solved.

In the time at my disposal, I want to discuss two advances in cataract surgery which concern important phases of the operation. One is a technique of subluxeation which we have found useful. The other is the new technique known as enzymatic zonulolysis.

SUBLUXATION OF THE LENS

Earlier Techniques.—Subluxation of the lens, one of the essential steps in cataract extraction, is accomplished by three techniques: pressure on the lens capsule, traction on the lens capsule, and a combination of pressure and traction. Since 1903, when modern intracapsular surgery had its birth, a number of different techniques have been devised, of which the following are the most important:

1. In the original technique devised by Smith, subluxeation of the lens is accomplished by pressure, a wedge of vitreous being used to rupture the suspensory ligament. The method has decided disadvantages. Even in Smith's own hands, the incidence of vitreous loss, prolapse of the iris, and incarcerations was estimated at about 20 per cent. Total loss of the eye was also a possibility.

Harrington, in 1949, reintroduced Smith's concept that rupture of the zonular lamellae of the lens can be accomplished primarily by a wedge of vitreous by external pressure. The idea of reviving it came to him after gonioscopic studies on a patient with a large iridodialysis. His observations indicated that pressure applied on the sclera 6 to 8 mm. from the limbus in the region of the dialysis produced a greater bulge of the vitreous

against the zonular membrane than could be produced by comparable pressure anywhere else on the globe. A series of studies on animal and human eyes further showed that rupture of the zonular fibers would occur when enough pressure was applied on the sclera to pinch off a wedge of vitreous between the equator of the lens and the ciliary processes.

The reasoning is ingenious, but, on the surface, this method of accomplishing subluxation seems no safer now than it seemed when it was originally devised by Smith. In our own experimental studies, furthermore, it was never possible, by the application of pressure on the sclera, to pinch off a portion of the vitreous and produce a stretching of the zonular fibers at any desired point, as in Harrington's observations.

2. The difficulties and dangers of the Smith technique led to the development of other techniques of subluxation. Barraquer's method, introduced in 1924, involves traction in the form of suction. In this technique, after a vacuum cup is applied to it, the lens is lifted slightly and rotated on its anteroposterior axis in order to sever the suspensory ligament. Then, chiefly by means of traction, the lens is made to glide in the curvature of the patellar fossa and is delivered either head first or by tumbling.

Barraquer's technique has one very evident objection, the difficulty of regulating the intensity of the vacuum produced by the rather complicated apparatus used. If the suction is too great, the capsule ruptures. If it is not great enough, the vacuum cup slips. These difficulties were later overcome when Dimitry introduced his much simpler erysiphake, which was later modified by Bell and Esposito.

3. Knapp's technique, which is similar to the technique devised independently by Stanculneau, involves both pressure and traction. The lower third of the anterior capsule is grasped under the iris with the Kalt forceps, and subluxation is accomplished by pressure from below. The grasp of the forceps on the capsule is then released and delivery is accomplished by the Smith pressure technique. The results of this technique, however, were no more satisfactory than the results accomplished by Smith's technique. There was a high incidence of rupture of the lens capsule and a high incidence of prolapse of the vitreous and the iris.

4. With the idea of overcoming these difficulties, Torok modified Knapp's technique as follows:

A Daviel spoon is held in the right hand as the Kalt forceps is introduced into the anterior chamber and its blades are opened with the left hand. Then a fold of the capsule is grasped with slight

forward pressure and the zonular attachments are loosened by a few lateral and circular movements. Next, as the lens is held firmly in the grip of the forceps, the Daviel spoon is applied just below the lower limbus and both forceps and spoon are manipulated at the same time. Lateral movements are continued with the forceps as slight gentle forward traction is exerted with it upon the lens, in the direction of the anteroposterior axis of the eye. Meantime, gentle pressure is made intermittently upon the sclera by indenting it with the spoon and then releasing the pressure.

Rupture of the zonule inferiorly usually occurs as the result of these maneuvers, and the lower edge of the lens slowly emerges from behind the iris. As soon as this occurs, the forceps is moved slowly toward the wound, and continuous pressure is made with the Daviel spoon, which follows the lens, just as in the von Graefe technique of extraction, until the lens is delivered lower edge first.

5. Verhoeff considered that his technique, which was published in 1927, was superior to both Knapp's and Torok's because it provides a firmer hold on the lens, under direct visualization, and is less likely to cause loss of vitreous.

In this technique, pressure is applied upon the lower margin of the cornea until the upper margin of the lens is plainly visible, usually within a millimeter of the posterior lip of the wound. This margin is then grasped with forceps. Verhoeff believed that it is safe to press it still further upward before applying the forceps if this should be necessary to secure a good bite of the superior equator.

After the lens is grasped with the forceps, the muscle hook is moved from side to side while, at the same time, the upper portion of the lens is also moved from side to side by manipulation of the forceps. Rupture of the zonular fibers is thus facilitated. Obviously, loss of vitreous is a possibility in this technique unless it is correctly performed. Two precautions are necessary: 1. The cornea must be held against the lens by means of the hook until the lens is entirely out of the wound. 2. The lens must also be kept in contact with the posterior lip of the wound by means of the forceps. The amount of traction being exerted is gauged by observation of the tent-like stretching which ensues as the manipulations are carried out rather than by any sense of resistance to them.

6. Kirby's technique requires no form of counterpressure. His method is not satisfactory, however, when ophthalmologic surgeons prefer, as I do, that extraction be accomplished by tumbling, nor is it adequate to effect rupture of the suspensory ligament.

Kirby's technique differs from Verhoeff's in two principal respects: 1. Pressure is used before the application of traction and rotation of the lens in order to accomplish subluxation. 2. The lens forceps is applied on the anterior capsule of the lens superiorly instead of straddling the superior equator.

A New Technique of Subluxation.—For the last several years we have used, with a great deal of satisfaction, a technique of subluxation which has reduced the incidence of capsular rupture to a minimum because it reduces the amount of traction on the lens capsule and eliminates the use of a vitreous wedge for subluxating the lens.¹ It is carried out as follows:

The usual adequate corneoscleral section is made and the usual corneoscleral sutures are placed. Then a broad instrument, either a lens spoon or a lens loop, is placed on its side just behind the posterior lip of the incision and in the 12 o'clock position. When slight pressure is exerted with the instrument against the posterior lip, the pressure is transmitted by the lip itself, with its shelf, to the superior equator of the lens. As a result, the lens is caused to tilt along a transverse axis, feet up, and there is a very slight deformation of the vitreous body. The pressure applied is just enough to produce stretching of the suspensory ligament inferiorly, but not enough to produce a vitreous wedge intended to rupture the ligament. If a limbal-based conjunctival flap has been used, it can be smoothed back over the sclera and the spoon or loop applied over the region of the incision to produce a better tilt of the lens.

Point pressure, combined with a sliding movement, is now applied with the muscle hook just within the corneal margin, from 5 to 7 o'clock. The lens loop is next moved clockwise to the 2 o'clock position and the muscle hook is manipulated with the same point pressure and sliding movement to rupture the zonular fibers in that area. Finally, a similar maneuver is carried out with the lens loop at 10 o'clock while the muscle hook is moved between 4 and 6 o'clock.

If the zonular fibers are not resistant, the lens can be subluxated inferiorly by this technique. Negative pressure at the patellar fossa and at the ligamentum hyaloidea capsulare is partly overcome when it is used, and the inferior edge of the lens presents through the dilated pupil.

If no rupture of the inferior fibers is evident at the end of the manipulations described, the chances are that this technique will not succeed.

1. Haik, George M., and Jimenez, Timoteo: The Mechanics of Intracapsular Cataract Extraction: Description of a Technic for Subluxation of the Lens Without Trauma, South. M. J. 49: 209-215 (March) 1956.

The best plan then is to resort to stripping of the zonular fibers under direct visualization by the Kirby method.

When the capsule forceps or the erysiphake is applied, pressure is made over the sclera superiorly, about 6-8 mm. from the limbus, to push the lens slightly upward so that a good bite of the capsule can be taken inferiorly. It is most important not to push the forceps too far down in an attempt to secure a good grasp of the lens capsule. It is equally important that a satisfactory grasp be secured. The use of the Hague lamp during the application of the forceps or the suction cup will simplify this part of the operation.

The lens is tumbled out by a combined pressure-traction maneuver. Traction with the forceps is just sufficient to guide the lens out, while pressure is exerted with the point of the muscle hook to tuck the cornea behind the inferior equator. Delivery is completed by a wheeling action which breaks the superior fibers.

Comment.—Zonular rupture by capsular traction alone, as the early experiences showed, is a difficult and uncertain method of accomplishing subluxation of the lens. The combination of external pressure on the zonular fibers while traction is made on the capsule diminishes the incidence of capsular rupture but does not always prevent it. When this technique is used, rupture of the zonule is accomplished by pressure against traction applied to the lens capsule, and it is obvious that rupture at the site of the capsular bite can readily take place during the manipulations.

Delivery of the lens can be accomplished either by the sliding method, with the superior pole first, or the tumbling method, with the inferior pole first. Our preference, as I have already said, is for the tumbling technique when conditions permit it. One reason is that there is less risk of prolapse of the vitreous body when this method is used. Another is that it is easier to secure a grasp of the lens in the desired position in round pupil extractions.

The important consideration in the tumbling technique is that initial rupture of the zonular fibers must always be accomplished inferiorly and never superiorly. Pressure on the zonular fibers, applied externally through the cornea, is an effective, logical, and simple way of causing the desired rupture.

The problem is how to place the fibers in an advantageous position for rupture without jeopardizing the integrity of the lens capsule and the vitreous body. We have found that this can be accomplished satisfactorily by the technique which I have described. The rationale of this method is supported by the experimental studies which we undertook on freshly enucleated human eyes be-

fore we began to employ the technique in cataract operations. There was no loss of vitreous in any of our experimental studies, and this has been a very uncommon complication indeed since we have used this technique clinically.

ENZYMATIC ZONULOLYSIS

In view of the difficulties just described in securing rupture of the zonular fibers in cataract extraction, it is easy to see why any measure which will expedite this step would be welcome. It may be that the answer has been found in a procedure termed enzymatic zonulolysis by Barraquer, who reported it in 1958 before the 65th Congress of the French Ophthalmological Society.²

The enzyme with which Barraquer and his group did their work is manufactured by the P.E. V.Y.A. Laboratories in Barcelona, Spain, under the trade name of Quimotrase. It is obtained from veal pancreas in the form of chymotrypsinogen and is purified and crystallized to a white hydroscopic powder.

Barraquer reported his work with this enzyme as follows:

1. Experimentally, when alpha-chymotrypsin is used in a concentration of 1:5,000, maximum biochemical zonulolysis results, and there are no evident subsequent deleterious effects on other intraocular structures.

2. Clinically, this enzyme preparation has a specific lytic action on the zonular fibers in human subjects, the experimental results thus being duplicated.

3. When it is used, it is possible to extract a lens, regardless of the patient's age, without the complications which develop when mechanical zonulotomy is performed by means of scleral pressure or traction.

4. The incidence of such complications as iridocyclitis and detached retina is lowered when zonulotomy is performed by this method.

The only report to date in the United States medical literature on enzymatic zonulolysis concerns 32 cataract extractions performed by Rizzuti and his associates.³ About 5 cc. of the (1:5,000) solution were required to reach the zonula ciliaris, and satisfactory biochemical zonulolysis was achieved after a waiting period of 10 to 15 minutes.

The 32 patients in this series ranged in age from 5 to 81 years, and their cataracts represented the

congenital, senile, and complicated types. There were 4 unsatisfactory results, 2 due to faulty surgical technique. In the other 2 cases, both instances of congenital cataract, the enzyme seemed to have no effect at all. Needling was resorted to in one case and an extracapsular operation was performed in the other. In both instances the congenital cataracts were found to present very firm attachments to the anterior face of the vitreous body.

In all the other cases the intracapsular operation was performed with facility. The effects on the zonular membrane were sometimes dramatic. The majority of the lenses were seen to become globular and to demonstrate great degrees of motility, with subsequent shallowing of the anterior chamber. Vitreous was lost in only one case. The post-operative course was uneventful in all cases, and healing of the incision was good in all. There were no late changes noted in the iris or vitreous body. The enzyme had no apparent lytic effects on synechiae.

Our experience with alpha-chymotrypsin has not been as unqualifiedly satisfactory as either Barraquer's or Rizzuti's. It falls into three parts:

1. We were unable to remove the lens in either a monkey or a dog after we had used the enzyme by the technique employed by Barraquer. After removing the aqueous in another monkey and injecting the solution into the anterior chamber, we observed a minimal cellular reaction and a slight aqueous flare. In a monkey in which a solution of 1-500 and 1-1000 was used, there was total cloudiness of the cornea after one week.

2. After injecting the enzyme solution into 2 freshly enucleated eyes, we found that the zonular membrane could be ruptured with much less pressure and traction than were required to accomplish the same results in untreated eyes. These results were later duplicated in 6 other eyes. In all of these eyes, however, we found that the anterior hyaloid membrane could be ruptured with very slight manipulation.

3. In the approximately 35 cataract extractions in which we used this technique, we found that the zonular membrane could be ruptured with the same ease as in the enucleated eyes.

4. We also observed certain undesirable effects in these 35 cataract extractions. In some eyes the pigment of the iris was broken up and loosened, just as in the diabetic eye. In some cases the cornea was quite cloudy for several days after operation. All of the corneas eventually cleared except for 2, which continue to show the cloudy appearance one finds in chemical burns. In some cases the capsule of the lens evidently participated in some way in the enzymatic action, for it was very diffi-

2. Barraquer, J.: Enzymatic Zonulolysis: Contribution to Surgery of the Lens. Presentation before the 65th Congress of the French Ophthalmological Society, Paris, May 1958.

3. Rizzuti, A. Benedict: Alpha-Chymotrypsin (Quimotrase) in Cataract Surgery; Enzymatic Zonulolysis, A. M. A. Arch. Ophth. 61: 135-140 (January) 1959.

cult to grasp with the forceps. Keratitis occurred in some cases; whether it would have developed in them without the use of the enzyme it is impossible to say. In 2 cases, both recently observed, the aqueous which remained in the anterior chamber was congealed.

These are disturbing complications, for which there are several possible explanations. One may be the enzyme preparation used. We have had no experience with the enzyme prepared in the Barcelona Laboratories. The material we used experimentally was procured from the Department of Pharmacology at the Louisiana State University School of Medicine, in which it was being employed for other purposes. It was sterilized with considerable difficulty, with the aid of the Department of Microbiology. The material used clinically was supplied by the Armour Laboratories for investigative purposes.

Another explanation of the differences between our results and those reported by Barraquer and Rizzuti and their groups may be that the different enzyme preparations require different strength solutions. Our first work was done with the 1:5,000 solution used by Barraquer and Rizzuti. Recently we have been using a 1:8,000 solution, and it may be that this is also stronger than is desirable.

Whatever the explanation, certain questions which have arisen in our minds cannot be ignored:

1. Since the anterior hyaloid membrane is thinned when this technique is used, will there be an undue number of ruptures of this membrane after cataract extraction? Rupture of the hyaloid membrane means that vitreous can enter the anterior chamber, come into contact with the cornea, and produce corneal edema, keratitis, and corneal dystrophy.

2. Will changes in the angle occur, with scarring and fibrous tissue proliferation? If so, there will surely be a higher incidence of secondary glaucoma.

At the 1958 session of the American Academy of Ophthalmology, Dr. Derrick Vail reported informally on the personal observations which he and a number of other ophthalmologists of superior ability and experience had made personally in Barraquer's clinic. A formal report on this experience has since appeared.⁴

The visiting ophthalmologists were all impressed with the clinical effectiveness of alpha-chymotrypsin. They observed under magnification the actual lysis of the zonule and the apparent macroscopic lack of damage to the hyaloid face. In the postoperative cases observed, there was also

no apparent effect on the endothelium, the iris, or the hyaloid face. No microscopic or in vitro studies had been done, however, and no controlled studies undertaken before the clinical investigation was launched.

The conclusions of the visiting group of ophthalmologists, in some instances based on later personal experience with the new agent, were as follows:

1. There is no doubt of the effectiveness of alpha-chymotrypsin, but disastrous results could be associated with its use in children. Vitreous was readily lost after the lens was removed, though this was more likely due to the surgical factors involved in removing the lens in childhood than to the enzyme.

2. While no evidence was found that the enzyme damages epithelium, no controlled microscopic investigation has been carried out to prove this assumption. It might be added that sufficient time has not elapsed since this enzyme was introduced to warrant definitive statements on this point.

3. Barraquer had 3 instances of delayed wound rupture in 197 cases, though his technique of closure is more effective than is usual in the United States. The effect of the enzyme on corneal healing therefore remains to be established.

4. Uveitis may follow the use of an incorrect concentration of the enzyme.

5. Since this is a proteolytic enzyme, it may induce an allergic response in the operated eye which will not be evident until the second eye is operated upon by the same technique.

If enzymatic zonulolysis proves harmless as well as effective, one more of the difficulties of cataract extraction will have been eliminated. Its innocuousness remains to be proved. Studies must be carried out to determine its effect on the cornea, the iris, the iris angle and the hyaloid membrane. Clinically, the enzyme must be used under carefully controlled conditions for 12 to 18 months. Only after an investigation of this sort will it be possible to make definitive statements about the limitations and risks as well as the advantages of enzymatic zonulolysis.

SUMMARY

In spite of the advances in cataract extraction in the last half century, a number of problems remain to be solved. Many of the earlier problems were eliminated when the intracapsular technique was introduced, but the extracapsular technique is still the preferred operation under certain conditions.

Subluxation of the lens is accomplished by pressure on the lens capsule, traction on the lens capsule, or a combination of pressure and traction. A technique is described which, in an extensive ex-

4. Troutman, Richard C.: Committee on the Use of Alpha-Chymotrypsin in Ophthalmology, *Tr. Am. Acad. Ophth. & Otolaryng.* 62: 875-876 (November-December) 1958.

perience, has proved efficient as well as free from the objections of the earlier techniques.

Enzymatic zonulolysis may be the answer to another problem of cataract extraction, but a personal experience with alpha-chymotrypsin sug-

gests that, while it is highly effective, it also has some dangerous side effects. Until its innocuousness is also proved by a series of carefully controlled studies, both experimental and clinical, it should be used with caution.

NITROGLYCERIN BY INUNCTION IN THE TREATMENT OF ANGINA PECTORIS

JAMES A. DAVIS, M. D.

Birmingham, Alabama

Angina pectoris has been defined as a "clinical syndrome brought about by a temporary discrepancy between oxygen supply and oxygen need in the heart, and characterized by a particular type of pain as well as by the likelihood of sudden death."¹ This syndrome is one of the commoner manifestations of arteriosclerotic changes in the coronary arteries. The location of pain is usually retrosternal or precordial with many variations in the degree of discomfort and in pain distribution. Radiation is most often into the left arm, but other areas are frequently involved. In the interpretation of chest pain due to angina it is important to determine non-cardiac factors which increase the severity of the angina or contribute to its presence.²

In recent years the entire approach to angina has been much improved, with consideration of prophylactic, therapeutic, and psychologic measures. Adequate treatment encompasses the prevention of attacks as well as their treatment. General therapy for angina, as with any heart disease, includes avoidance of physical and emotional stress, control of obesity, adequate rest, and moderation in habits. Therapy of acute attacks has consisted of the use of the rapidly acting nitrites, namely, glyceryl trinitrate (nitroglycerin) and amyl nitrite. Amyl nitrite is not routinely used because it produces a marked generalized vasodilation.³ Rapidly acting nitrites, usually nitroglycerin in tablet form, are given prophylactically before such physical or mental efforts as are prone to cause attacks. Since the short duration of action of these drugs limits their efficacy, the nitrites with a longer duration of action, Erythrol Tetranitrate, Mannitol-Hexanitrate, Pentaerythritol Tetranitrate, and Triethanolamine Trinitrate, have become a part of prophylactic therapy. The action

of these drugs has been widely studied, and new modifications are continually being introduced in efforts to improve their prophylactic effectiveness. Results are most difficult to evaluate, and thus far no one drug has proven entirely satisfactory, as evidenced by the number of preparations available. In addition to the above, other measures that have been employed in the treatment of angina pectoris are thyroidectomy, radioactive iodine, cardiopericardiopexy, internal mammary artery ligation or transplants, stellate ganglion blocks, thoracic sympathectomy, paravertebral block, and anticoagulant administration.

Angina being a subjective complaint, evaluation of results of any treatment is subject to question. "Pain is of infinite variability and to date has not been accurately quantitated in man either subjectively or objectively."⁴ The difficulties in diagnosis and treatment arise from variability of the conditions under which the attacks are precipitated, their irregularity and frequency, the subconscious self-imposed restrictions on activity, and the necessity of relying entirely on the patient's impressions.⁵

Various approaches to the evaluation of coronary vasodilator drugs have been reported. These include the number of attacks per day, the functional work capacity of the patient, the incidence and degree of beneficial effects, adequate control studies, comparison of results with clinical response, and objective cardiographic studies.^{6,7,8}

4. Russek, H. I.; Urbach, K. F.; Doerner, A. A., and Zohman, B. L.: Choice of a Coronary Vasodilator Drug in Clinical Practice, *J. A. M. A.* 153: 207, 1953.

5. Riseman, J. E. F., and Stern, B.: A Standard Exercise Tolerance Test for Patients with Angina Pectoris on Exertion, *Am. J. M. Sc.* 188: 646, 1934.

6. Freedberg, A. S.; Spiegl, E. D., and Riseman, J. E. F.: Objective Evidence of the Efficacy of Medicinal Therapy in Angina Pectoris, *Am. Heart J.* 22: 491, 1941.

7. Kalmanson, F. M.; Drenick, E. J.; Binder, M. J., and Rosone, L.: Pentaerythritol Tetranitrate in the Treatment of Angina Pectoris: Clinical Evaluation, *Arch. Int. Med.* 95: 819, 1955.

8. Albright, E. C.; Soder, P. D., and Crumpton, C. W.: I¹³¹ Induced Hypothyroidism in Intractable Angina Pectoris, *Ann. Int. Med.* 49: 271, 1958.

Read before the Regional Meeting of the American College of Physicians, Biloxi, fall of 1958.

1. Harrison, T.: Principles of Internal Medicine, Philadelphia, The Blakiston Company, 1954.

2. Adams, Wright: M. Clin. North America, Philadelphia, W. B. Saunders Co., January 1958.

3. Masters, A. M.: Angina Pectoris—A Thirty Year Progress Report, *J. A. M. A.* 162: 1542, 1956.

Much time and effort have gone into the study of some objective method of evaluation. It is stated that, if a study is to have validity, the investigation must include "only those patients with coronary disease who, on repeated testing under identical conditions, exhibit a rather constant positive response to a given amount of exercise."⁹

Results have been interpreted on the basis of marked decrease in frequency and severity of attacks and/or number of nitroglycerin tablets used per day or per week, cessation of the angina, decrease of attacks as related to activity, the patient's record of the number of attacks experienced during each period of treatment, the patient's opinion of the effectiveness of the treatment, and the measurement of the patient's exercise tolerance under the conditions of the test.¹⁰

The shortness of duration of action of nitroglycerin sublingually has been a prohibiting factor in its use in the total management of angina, and has led to the use of nitroglycerin by inunction for its prolonged effect.^{11,12} This ointment was used originally in studies of its effect on peripheral circulation.^{13,14,15} Riseman¹⁰ has recently reported an evaluation of six patients in which four of them did get some response and two had no response. He comments: "The effectiveness of nitroglycerin by inunction is of interest because it illustrates the well known fact that this drug can be absorbed through the unbroken skin. The lack of popularity of treatment by inunction further limits its value in present day clinical therapy of angina pectoris." In a recent article on intractable angina, no mention was made of this method of treatment.²

Forty one patients have been observed for a sufficient time to evaluate the effects of nitroglycerin ointment in conjunction with the other

usual measures in the treatment of angina. The diagnosis of angina has been proven by acceptable standards in all cases. In each instance the clinical results were unsatisfactory at the time the ointment was started. Many of these patients were showing little or no response to therapy. Nearly three-fourths of these patients had recently been on long acting nitrites, and several patients were having almost intractable angina. The study and analysis of results of this program of treatment is provided by a record of the number of nitroglycerin tablets required before the ointment was started, and a similar tabulation afterwards. It was not considered justifiable to substitute an inert ointment in these patients as a placebo because of the possible danger of inducing myocardial infarction in patients with severe angina. A commercial 2% nitroglycerin ointment has been used. The ointment has been gently applied to a skin area five to eight inches in diameter, most often over the chest. Initial dose has been 1/2 inch of the ointment applied three or four times daily. Dosage may be varied by decreasing or increasing the length of the ribbon of ointment. The actual amount of nitroglycerin in such dosage has been calculated to be 15 mgm. in each inch of ointment. Frequency and time of application has been governed by the effect on the pain pattern. Headache has been a side effect of this method of treatment, and at times has made it necessary to decrease the amount used in a single dose. Tolerance to side effects usually develops rapidly, and any reduction of dosage is only temporary. There has been minimal tolerance to therapeutic effects; that is, seldom has there been a need for an increased amount of ointment by the patient who was doing well. Chief indication for reduction of dosage has been improvement as gauged by a decrease in the number of attacks of anginal pain or the number of nitroglycerin tablets required. Hemoglobinemia has not been observed in any of these patients.

Clinically, there has been definite benefit from this therapy when this has been made a part of the total treatment plan of angina pectoris. Classification of results has been based on the reduction of the number of sublingual nitroglycerin tablets required, as well as the subjective effects reported by the patients. The results may be influenced by a number of factors other than coronary insufficiency. Some patients had only arteriosclerotic heart disease, while others had complicating diabetes, gallbladder disease, and other pathologic processes which might interfere with response. The mental attitude alters effects, as failure to carry out the supplemental regimen or carelessness in applying the ointment adversely affected some cases. Selection of patients may be of importance. Those who do best may be the more obsessive individuals. The person who "doesn't

9. Russek, H. I.; Zohman, B. L.; Druman, A. E.; Weingarten, W., and Dorset, V. J.: Long Acting Coronary Vasodilator Drugs: Metamine, Paveril, Nitroglyn, and Peritrate, *Circulation* 12: 169, 1955.

10. Riseman, J. E. F.; Altman, G. E., and Koretsky, Sidney: Nitroglycerin and Other Nitrites in the Treatment of Angina Pectoris, *Circulation* 17: 22, 1958.

11. Davis, J. A., and Wiesel, B. H.: The Treatment of Angina Pectoris with a Nitroglycerin Ointment, *Am. J. M. Sc.* 230: 259, 1955.

12. Hefner, L. L.; Friedman, B.; Reeves, T. J.; Eddleman, E. E., and Harrison, T. J.: Symposium on Coronary Vasodilator Drugs, *Circulation* 15: 111, 1957.

13. Fox, M. J.: Treatment of Raynaud's Disease with Nitroglycerin, *Wisconsin M. J.* 47: 855, 1948.

14. Kleckner, Jr., M. S.; Allen, E. V., and Wakim, K. G.: The Use of Glyceryl Trinitrate (Nitroglycerin) Ointment in the Treatment of Raynaud's Disease, *Proc. Staff Meet., Mayo Clinic* 25: 657, 1950.

15. Lund, F.: Percutaneous Nitroglycerin Treatment in Cases of Peripheral Circulatory Disorder, *Acta Med. Scandinav. Supp.* 206: 196, 1948.

want to be bothered” is not a good candidate for this preparation. It has been pointed out that exposure to air or simple aging will alter the pharmacologic properties of the ointment, as is true with nitroglycerin tablets.

The forty one patients who have been treated with nitroglycerin by inunction include twenty nine men and twelve women, whose ages ranged from 42 to 85. At present twenty eight of these patients are living. Twenty two of the forty one had previously had infarctions. Thirty previously had used a long acting nitrite. Thirty seven patients had an abnormal resting electrocardiogram. Nineteen patients experienced good results, fifteen fair results, and seven poor results. Those classified as poor have shown absence of improvement. Often the ointment was stopped because it was too bothersome or messy, or because of headaches.

TABLE I									
Age	No. of Patients	Sex		Liv- ing	EKG Abnor- mal	Pre- vious Infarc- tions	Good	Results Fair	Poor
40-50	7	7	0	5	7	5	4	3	0
50-60	5	4	1	5	5	2	3	1	2
60-70	14	9	5	8	12	7	6	4	3
70-over	15	9	6	10	13	8	6	7	2
Total	41	29	12	28	37	22	19	15	7

The greatest value of this method of the use of nitroglycerin has been in the relief of night pain. The duration of action has varied, but most often has been from four to six hours. Many patients who were restless and wakeful during the night because of anginal pain have found that their night's rest is much less disturbed. There has been a definite decrease in the number and severity of attacks in many of these patients, and many of them are apparently improved. This preparation seems to have value in the treatment of angina in selected cases.

SUMMARY

The prophylactic treatment of angina pectoris is still unsatisfactory. The value of the use of nitroglycerin in acute attacks is unquestioned. A nitroglycerin ointment has been used in an effort to obtain the effect of nitroglycerin over a longer period of time. This drug has been used clinically in forty one patients, and the results have been evaluated by the number of nitroglycerin tablets used before and after the use of the ointment, and the patient's subjective improvement. A good or fair response was noted in 83% of patients who were treated by this method. Its use is selective, and its greatest use is in those patients with increasing frequency or severity of attacks of angina, and particularly of the nocturnal type.

SURGICAL SIGNIFICANCE OF SPASTIC COLON

FREDERICK W. SMITH, M. D., F. A. C. S.

Huntsville, Alabama

Those of us who have gone into surgery should always try to remember that the best surgeons are good doctors who can operate. They are trained first as doctors, then further as surgeons. The surgeon's training embodies two basic principles. First, he must be able to know whether or not to operate and, if so, when. Second, he must acquire the judgment and skill necessary to choose the correct procedure and carry it out.

It is our belief that, in too many instances, surgical training and surgical literature as a whole have been preoccupied with organic disease almost to the total exclusion of disorders of a functional nature, which, in out-patient care, are relegated to internal medicine and psychiatry. This leaves the newly finished surgeon with a deficiency in his knowledge of one of the causes of abdominal pain. Upon completing a busy residency and beginning his practice, the new surgeon who has this hiatus in his training is at considerable loss as to what course to follow in those patients in whom no organic disease can be found. This lack

of emphasis on functional abdominal pain is not limited to departments of surgery but also to other departments in which such a patient may be seen in a teaching hospital. Even though it may be recognized as functional, the patient is usually turned over to another department, frequently psychiatry, where many of these people do not belong for they are not really mentally ill or severely emotionally deranged.

All of us have seen those patients who have been the victim of needless surgical procedures for vague abdominal complaints yet who continue to complain of these vague pains following one or several operative procedures. This surgery has been undertaken to relieve the patient of the very complaints with which they continue to suffer. These are the patients with the battle-scarred abdomen, so familiar to us all, who have had their appendices removed, usually with the diagnosis of chronic appendicitis, or have had cholecystectomies for non-calculous cholecystitis or both. Still others have had various pelvic procedures done, depending upon the whim of the operator. Into this category fall those patients who have been

Read before the Alabama Chapter, American College of Surgeons, Point Clear, February 13, 1959.

operated on for adhesions. Usually these patients have continued after a time to have the symptoms which drove them to a doctor in the first place.

On the other hand, there are many instances in which the patient was not operated upon due to the commendable insistence of his physician upon definite indications for surgery. Yet this patient has received no adequate explanation or treatment for his pain and symptoms, and we find a patient who is confused, bitter toward the medical profession, and usually one who has consulted chiropractors or other cultists, usually with some relief.

These groups of patients to which I refer are those who have vague abdominal pain as the most frequent symptom which causes them to seek medical attention. Diagnosis of abdominal pain is usually the forte of the surgeon, which is as it should be, for, as has been mentioned above, it is his duty to differentiate those cases requiring surgery from those which do not. Further, his duty does not end merely with this differentiation, for in many instances the referring physician may need more help toward a diagnosis than merely a statement that it is not surgical in nature.

It is not our purpose here to undertake the differential diagnosis of abdominal pain but merely to take one rather poorly defined cause and discuss its protean manifestations. This is a functional disorder and has been known variously as mucous colitis, spastic colon, or irritable colon. It has been discussed at some length by our colleagues in gastroenterology, who recognize it quite well. Donovan¹ states that failure to recognize this disease as a functional bowel disorder constitutes one of the greatest single sources of error in the diagnosis and treatment of the patient who presents with a complaint of abdominal pain. He further quotes Bockus and Willard as having 1000 consecutive case records of office patients in which they found some type of functional colonic disorder present in 46%. Kirsner and Palmer² attribute 50 to 70 per cent of all digestive complaints to the irritable colon. Sleisenger³ states that by far the most frequent entity encountered in clinical medicine is the irritable colon syndrome. The opinions of these authors who have presented these figures indicate that it is a fairly common disorder, quite well recognized among gastroenterologists.

The etiology of spastic colon, or the irritable colon syndrome, has been discussed at some length in medical literature. It has been agreed by most

that emotional tension probably plays the greatest part in its origin, although physiologic factors, such as poor dietary habits and the laxative habit, may play the primary role in a small percentage.^{1,2,4} Almy⁵ demonstrated the reaction of the colon to various types of emotional stress both by direct observation through a 25 cm. sigmoidoscope and by inserting balloons, attached to kymographic drums, into the rectum. In both instances the patients were subjected to emotional stress of various types while under observation. Normal patients revealed an increase in the contractile state of the bowel while under stress. In those instances of irritable colon in which the patient reacted with hostility and resentment, the same type of increased contraction was noted. These were the patients who had complained of constipation in their symptom complex. Other patients with the irritable colon syndrome reacted with a decrease in the contractile state when subjected to stress. These patients had complained of diarrhea as a symptom, and on interview demonstrated hopelessness, guilt and self reproach. Sleisenger³ similarly states that mucous colitis is a psychophysiologic disorder of the colon brought about through the action of the parasympathetic nervous system, and that the commonest source of parasympathetic over-stimulation is emotional tension. However serious the emotional disorders described above may sound, those factors usually found are not major derangements but the usual pressures of daily life with its problems, anxieties, and frustrations. Many of the² patients seen with this disorder are in responsible positions, and are holding their own in their jobs and daily life.

Symptomatically, spastic colon is a very variable disorder in the individual patient, who may present with one or many of the usual symptoms. They are usually vague abdominal pain or distress, gaseous distention, borborygmi, a tender cord-like sigmoid, a distended cecum, some alteration of fecal elimination, and either constipation or diarrhea. One may also find passage of excessive mucus per rectum. A diagnosis of irritable or spastic colon is made primarily by exclusion of all other organic factors which could cause the symptoms with which the patient presents himself. Unfortunately, this condition, being one primarily of functional nature, has very little in the way of positive findings to help in its diagnosis. The laboratory data are usually so normal that any significant variation should cause one to suspect other factors. Various authors differ in their description of the x-ray findings in spastic colon, Don-

1. Donovan, E. J.: Diagnosis and Treatment of the Irritable Colon Syndrome, Rocky Mountain M. J. 50: 952-956, Dec. 1953.

2. Kirsner, J. B., and Palmer, W. L.: The Irritable Colon, Gastroenterology 34: 491-501, March 1958.

3. Sleisenger, Marvin H.: Colitis: Ulcerative and Spastic, Am. Pract. 5: 59-67, Jan. 1958.

4. Shallenberger, P. L., and Kerr, P. B.: The Irritable Bowel Syndrome, Postgrad. Med. 13: 32-38, Jan. 1953.

5. Almy, T. P.: Experimental Studies on the Irritable Colon, Am. J. Med. X: 60-67, Jan. 1951.

ovan¹ indicating the primary finding to be one of rapid transmission of the barium meal through the entire gastrointestinal tract. Poppel⁶ et al. find functional abnormalities as a result of 3 factors: the peculiar mucoid material in the colon, spasticity, and increase in peristaltic effort. They describe defects in the barium column as a result of mucus content. Occasionally little or no mucosal pattern is seen as a result of the increased amount of mucus, but there is no evidence of ulceration or pseudopolypoidosis as is seen in ulcerative colitis.

What bearing has all of this on the patient insofar as the surgeon is concerned? It is that which has to do with abdominal pain as a presenting symptom. This pain varies greatly both in location and severity and resembles many of the conditions for which we are called upon to see patients. First, let us discuss the patient whose pain occurs primarily over the cecum. When there is a spastic sigmoid colon which in itself is not producing pain in this case, the pain may localize over the cecum, the most distensible portion of the colon, due to lack of elimination of flatus. The patient may complain of a mass being intermittently present in this area, particularly when his pain is most severe. The pain itself may be merely one of a nagging nature or it may approach that of an exquisite pain with considerable tenderness on pressure. Usually, no fever or leucocytosis accompanies this pain. Tympany is practically always present over the cecum and one usually finds a tender rope-like sigmoid. The patient may have some change in habits of elimination, usually constipation, possibly diarrhea, and may give a history of passing mucus in his stool.

This particular variation of the spastic colon syndrome has resulted in innumerable appendectomies for chronic appendicitis due to lack of recognition of the mechanism of the pain. With lack of recognition many physicians remove the underlying organ in desperation in hope of curing the patient. Strangely enough, it does seem to relieve the patient, for a time at least. What could be better for emotional tension than a general anesthetic, plenty of bed rest, sedation, attention from doctors, nurses and family, and sympathy from friends and fellow workers. Therefore, relief is not uncommon, and the doctor who has removed this chronic appendix is sanctified in the eyes of the patient and will again be called when the syndrome returns.

Still another variation of the syndrome of irritable colon may be termed the hepatic flexure syndrome, as it has been called by several authors.

In these patients, once again, the sigmoid spasm causes little or no pain. The localization of pain here lies in or near the hepatic flexure of the colon which occupies the right upper quadrant of the abdomen. The pain may be one of a chronic aching nature, and, depending upon how much of the colon is involved, it may cause pain under one or both shoulder blades. On the other hand, the pain may be one of an acute type, and may even require narcotics for its relief. The fact that it is functional does not lessen its severity. In fact, Donovan¹ states that under his care he saw the wives of three physicians with irritable colon syndrome who had become narcotic addicts as a result of the drugs which had been administered to give them relief from their pain.

However, there is another condition which is evidenced by right upper quadrant pain, radiating to one or both shoulder blades, and also typified by recurrent attacks of severe right upper quadrant cramping pain requiring narcotics for relief. This, of course, is cholecystitis, chronic and acute, respectively, and since there is an organic condition evidenced by pain in the right upper quadrant caused by inflammatory changes in an immediately underlying organ, the symptoms arising from the functional disorder are frequently attributed to cholecystitis due to the similarity in the clinical picture of the two.

It is our belief that the irritable colon syndrome, manifested by hepatic flexure pain which may produce these symptoms mimicking cholecystitis, is the reason that there are many normal gallbladders removed in good faith by those unaware of the similarity of symptoms produced by the two conditions. We also feel that the explanation for many of the patients who have the so-called postcholecystectomy syndrome lies in an unrecognized irritable colon producing those symptoms attributed to cholecystitis originally and the postcholecystectomy syndrome postoperatively. It is possible that this is the basis of the symptoms of the so-called biliary dyskinesia in which a gallbladder shows beautifully on x-ray with no stones but does not empty well. The inadvisability of surgery in these instances has long been recognized by most surgeons, for it is known by many as a medical gallbladder. Briefly, we feel that many patients who have symptoms persisting postoperatively in the absence of jaundice had those symptoms originally as a result of an irritable colon rather than cholecystitis, even though stones were found in the gallbladder.

The question next arises as to the differentiation between cholecystitis and irritable colon with such identical symptoms, and occasionally with overlapping of the two conditions. In the instance of the chronic recurrent low grade pain, the chole-

6. Poppel, M. H., et al.: Mucous Colon, *Radiology*, 65: 50-56, July 1955.

cystogram may assume even more importance than usually attributed to it, for in many instances it is the only differentiating test which we have. In those instances in which two consecutive cholecystograms reveal a non-functioning gallbladder, or in those instances in which stone shadows are definitely seen, then cholecystectomy is the procedure to be advised because of the well-known consequences of long standing cholelithiasis. However, in those instances in which a normally functioning gallbladder is seen without stones on the cholecystogram, the surgeon should think long and hard before operating, for, regardless of how typical the symptoms may be, the pathologist will usually describe a normal gallbladder, and after a variable postoperative interlude the symptoms may return, and may then be considered a post-cholecystectomy syndrome.

Those cases with hepatic flexure pain which present with acute severe right upper quadrant pain, which may be knife-like and require narcotics for relief, usually lend themselves to clinical differentiation from acute cholecystitis somewhat more easily than does the chronic type from chronic cholecystitis. In these cases resulting from irritable colon, the patient seldom shows any temperature elevation or significant leucocytosis, whereas acute cholecystitis usually causes both, although it may be very mild in degree. In the irritable colon syndrome there is no palpable gallbladder, which may be found with acute cholecystitis. When he is confronted with a patient with severe pain in the absence of any such supporting evidence of organic disease, the surgeon will do well to go slowly and obtain cholecystographic evidence of gallbladder disease before proceeding with cholecystectomy. The author had one such case in which the patient revealed no fever or other signs of illness except pain. Cholecystogram revealed innumerable small stones, and cholecystectomy was advised and performed. About 60 days later, while the patient was visiting in another city, a similar episode occurred and the patient was assured she had a gallbladder attack and that if the surgeon who had operated on her told her he had removed her gallbladder it was not so. Yet she did not develop jaundice with this attack or with succeeding similar attacks over the next two years. The symptoms remained abated whenever she was on mild sedation and antispasmodics, but since the attacks occurred relatively infrequently she would not remain on her medication consistently.

We are probably more familiar with the splenic flexure syndrome than with other aspects of the irritable colon because the patient presents with severe cramping or knife-like pain in the left upper quadrant where there are no underlying organs that may be so easily blamed for the symp-

toms. For this reason this particular aspect has been recognized more by surgeons than other aspects of the irritable colon syndrome. It has little surgical significance except that it may be confused with some other cause of acute abdominal pain and is quite similar in severity, in some instances, to the colic seen with small bowel or sigmoid volvulus, or some other type of acute abdominal crisis. Frequently, when the splenic flexure is involved, the picture may be chronic and recurrent rather than acute, in which instance it may be one of pain at or around the heart, beneath the costal margin, and, possibly, in the left shoulder by diaphragmatic referral. This is frightening to the patient due to its proximity to the heart but not of such surgical significance as the acute abdominal pain without supporting fever or leucocytosis.

Numerous references mention the tender rope-like sigmoid found on physical examination in those patients suffering from an irritable colon. One of the facets of this will-of-the-wisp disorder is chronic pain in the left lower quadrant which resembles chronic diverticulitis in the type of pain presented, a more or less constant gnawing ache. However, there is no fever or leucocytosis, and on x-ray there is no evidence of diverticula or diverticulitis. In women there will be no significant findings in the pelvis in most instances. The exact mechanism of this pain in the left lower quadrant found with irritable colon syndrome has not been adequately explained. However, in some patients this will be the only complaint of pain although most are constipated. The x-ray may or may not indicate excessive mucus formation and spasm here, and frequently a valuable clue to the origin of the pain may occur during sigmoidoscopic examination when the pain is reproduced or intensified by air insufflation of the rectosigmoid colon. The rectum and rectosigmoid colon may be seen to be excessively tight and resistant to the passage of the sigmoidoscope but otherwise normal to inspection. Stool examination is usually negative for parasites, ova, or cysts.

Those patients who present themselves with this symptom, as well as those patients with right-sided pain and a previous appendectomy, are frequent candidates for exploratory surgery for adhesions, and in female patients with these symptoms various portions of the pelvic viscera may be removed, usually in succeeding operations. Once again it should be pointed out that these patients experience temporary relief from symptoms that beguiles the patient and the doctor into the belief that the surgery was of benefit in the relief of symptoms.

The treatment of this syndrome has been discussed at some length in the medical literature

having reference to gastroenterology. There are three different aspects to the therapy. First, local irritants to the bowel should be eradicated. These consist of the harsh laxatives which most of these patients take, along with harsh or highly seasoned foods, and cold liquids. Coffee, also, has been a very important factor in the author's experience. Second, drug therapy may be of some benefit but has been thought disappointing by most gastroenterologists. This consists of sedation and some type of anticholinergic drug to relieve some of the bowel overactivity. Third, the establishment of a good doctor-patient relationship has been given a considerable role in the relief of the patient. This relationship may be begun by a complete examination for there is considerable psychotherapeutic value in a completely negative physical and x-ray examination. It is most important in explaining things to the patient to make him understand the difference between a functional disorder and malingering, for most patients feel that they are being accused of wanting to be sick. This gives them a feeling of guilt and has a tendency to make them angry with a doctor who would accuse them of such a thing. For this reason it is better to use "tension" rather than "nervousness" in the explanation. Also, comparing irritable colon with other tension-aggravated disorders such as duodenal ulcer, in which there is demonstrable disease, makes him more willing to accept the explanation of the etiology of his disorder. The actual amount of rapport one is able to establish will vary from one patient to another, some even requiring psychiatric help. In others, who have been hardened to explanations by many previous references to nervousness, it has been advisable to prescribe drug therapy first in a confident manner. After a brief interval, if the patient has experienced some relief, he will have much more faith in the words of the doctor who has afforded him this relief. Then the nature of his disorder may be explained to him, and if he is not made to feel guilty of malingering or consciously trying to become ill, he will more than likely accept the explanation in good faith and cooperate to the utmost in his continued treatment. In some instances, final diagnosis may be based on clinical therapeutic trial with sedation and antispasmodics, and explanation might best be delayed until results are clear and the diagnosis more definite.

It is true that the ultimate management of the irritable colon syndrome is a medical problem rather than surgical. However, the first responsibility of any doctor is to the patient, and many of the patients who present themselves to a surgeon do so because he is the one particular doctor in whom they have the utmost confidence. Consequently, when they have abdominal pain and seek him out for diagnosis and treatment, immediate

referral may damage their chances of relief. For this reason, in some instances the surgeon should initiate therapy and then turn the patient over to another physician.

It is not intended that irritable colon should be the first diagnosis to cross the mind of the surgeon as he sees a patient who presents with abdominal pain, for every chance of organic disease should be ruled out before this diagnosis is made. However, a fairly thorough perusal of several leading surgical journals over a period of some ten years has failed to bring to light more than a passing mention of the irritable colon as a cause of abdominal pain. For this reason it has been felt proper to remind ourselves that all abdominal pain does not have an organic basis. Failure of the surgeon or physician to recognize this fact, and unfamiliarity with the irritable colon syndrome, may cause a patient to suffer unrelieved distress until he finds someone who does recognize it, or even worse may cause him to undergo needless surgery without permanent relief. Unfortunately, the lack of typical physical findings and laboratory evidence does not allow this entity to be proved in a positive fashion. Only the lack of evidence of organic disease with the previously described symptom complex indicates the diagnosis, unless roentgenographic findings indicate its presence. The diagnosis may be strengthened by therapeutic trial with sedation and antispasmodics with relief of pain, and we feel it particularly significant from a diagnostic standpoint if the constipation usually present is also relieved.

There is considerable difficulty in attempting to present a series of cases in which there is no way to prove the patient had such a disorder in the first place except clinical relief. However, in those cases in which a diagnosis of irritable colon syndrome was made by exclusion of organic disease, and which responded to treatment, there has been no instance, in our knowledge, in which organic disease of a type to cause the pain was later turned up within the length of time compatible with a missed diagnosis.

In summary, the irritable colon syndrome is a frequently encountered disorder. The pain associated with it occurs in various locations in the abdomen and resembles organic disease. Failure to recognize this may result in needless surgery without relief of symptoms. Since one of its primary symptoms is abdominal pain, the surgeon should be familiar with its occurrence, diagnosis, and treatment.

NEXT ANNUAL SESSION

MOBILE

APRIL 21, 22, 23, 1960

A SYMPOSIUM ON
THE MANAGEMENT OF ADVANCED CARCINOMA
OF THE BREAST

<i>Panelists:</i>	Dr. Joseph A. Cunningham Department of Pathology
	Dr. George Andrews St. Vincent's House Staff
	Dr. Harvey J. Thompson, Jr. Department of Radiology
	Dr. William L. Hawley Department of Medicine
<i>Moderator:</i>	Dr. Arthur I. Chenoweth Department of Surgery

Dr. Chenoweth: As was announced, the subject for the symposium this morning is the management of advanced carcinoma of the breast. We recognize that the surgical treatment of advanced carcinoma of the breast has its limitations. Some results are gratifying; I think that it might be said in general that we can expect to salvage some sixty to seventy per cent of the patients who have no axillary metastases at the time of surgery, and perhaps some forty to fifty-five per cent of the patients who do have such metastases. We are left with a large group of patients with carcinoma of the breast who go along to local or distant metastases and for these patients at the present time we have no means of affording permanent cure. We do, however, have a number of adjuncts that allow us to offer them prolonged life and relative comfort. It is for the purpose of discussing those methods of management that we are gathered.

Dr. Cunningham, I should like you, please, to start the discussion, and should like to have you give us your views on the pathologic features of carcinoma of the breast which might influence prognosis. First of all, give us, if you will, your opinion regarding the value of grading tumors.

Dr. Cunningham: In this hospital we do not grade neoplasms numerically. The reasons for not doing so, I shall try to present. The grading of tumors originally was done based upon the concept that the morphologic features of a tumor reflect its biologic behavior and, hence, has prognostic value. Furthermore, it was believed by many that the higher the grade and, thus, the more undifferentiated the tumor, the better the response to radiation. The actual grading was based on a number of factors: in the glandular tumors the major emphasis was placed on the degree of differentiation; e. g., the closer the gland pattern is to the normal gland pattern of the organ from

which the tumor originated, the lower the grade; grade 1 adenocarcinoma would very closely resemble the parent gland, grade 4 would be difficult to even recognize as a glandular tumor. The non-glandular neoplasms are graded on such things as nuclear basophilia, variation in nuclear size, numbers and types of mitoses and, to a lesser extent, degree of differentiation from the parent cell.

This concept seemed very reasonable and enjoyed a long period of popularity. The objections to the system became obvious as it became more popular. The prime objection to it is the fact, now well recognized, that the morphology of a tumor at best imperfectly reflects its biologic behavior. The other objections are practical. Ackerman and Dr. Fred Stewart, in particular, have shown that there is too great a subjective element in grading. The same group of experienced pathologists, given a set of slides to grade, will not be able to duplicate their own grades in more than 80% of the cases when the same slides are scrambled and resubmitted to them. More important, different areas from the same tumor will be graded differently. Some parts may show as many as seven mitoses per high power field and another area from the same tumor show practically no mitoses. This applies in similar fashion to the glandular tumor; a prime example is thyroid carcinoma. The correlation between grading and prognosis is at best a very imperfect one. Such factors as size of the tumor, invasive characteristics, presence or absence of blood vessel and lymphatic invasion, lymph node involvement, age of the patient, location of the tumor, and the intangible intrinsic biologic potential of the tumor are of much more importance than the grade of the tumor. Finally, experience has shown that the correlation between x-ray sensitivity and grade is imperfect and that experience has proven to be a better guide to withholding or giving irradiation to a given tumor.

Presented at the Weekly Surgical Conference of St. Vincent's Hospital, Birmingham, Alabama, Jan. 10, 1959.

For the above mentioned reasons we feel that the patient is better served by simply indicating whether or not the neoplasm is infiltrating. This is morphologically the fundamental criterion of aggressive malignancy and, when present, indicates a tumor capable of local invasion and/or distant metastasis. The implications for treatment of an infiltrative tumor are clear and, if this feature is not present, it is equally clear that the neoplasm has not one of the most significant characteristics of malignant growth and, hence, can be treated less drastically and has a better prognosis.

It has been well shown that in breast neoplasms the adequacy of the radical mastectomy, the number of lymph nodes involved, and the position of the lymph nodes alter the prognosis. An interesting study was conducted at the Presbyterian Hospital in New York which showed that one could correlate the 5-year clinical cure rate with the length of time taken in the operating room during the radical mastectomy. This same study also showed that the involvement of 1 or 2 nodes does not seriously compromise the hope for clinical cure, 3 to 5 nodes has a more serious effect, and with over 8 nodes involved only 25% survived the five-year period.

There is some question in my own mind about the average radical mastectomy done in this hospital. The number of lymph nodes found after careful search is not as high as we expect and this is supported by the fact that few of our radical breast operations take over three hours to do.

Skin recurrences have been a bugbear of breast cancer. These occur rarely if axillary node involvement is absent, with increasing frequency depending upon the degree of axillary node involvement. There are, however, many unknowns and mysteries that are completely unexplained. The recurrence of tumor in a breast scar twenty years after radical mastectomy can hardly be explained by seeding at the time of operation and brings up the challenging question of why did this tumor take so long to show itself and where was it all this time. This brings us back again to the sobering concept that our best efforts are pitifully inadequate.

I am always reminded that when we look at a tumor we say this one looks just like one we saw three years ago and that one killed the patient in six months. We then unjustifiably presume the same type of behavior. It would be considered silly if we looked at two teenagers who dressed alike and looked alike and presumed that they would behave in even a remotely similar manner.

To sum up, we do not grade tumors for the reasons outlined. On the positive side, we feel

more is to be gained by a precise histologic characterization of the entire tumor, with major emphasis placed on the presence or absence of infiltrative growth.

Dr. Chenoweth: Thank you, Dr. Cunningham. I hope that there will be some questions directed to the panelists later this morning. I shall ask you, however, to reserve these questions until the completion of remarks by all the panelists. I should now like to ask Dr. Moffett to present a brief summary of the patients whose cases are pertinent to this subject.

Dr. Moffett: The first case is that of Mrs. C. P. G. This 40-year-old woman had a radical mastectomy in October 1954. Pathologic examination at the time revealed infiltrating ductular carcinoma with scirrhus reaction. There was extension within the breast and metastatic involvement of nine of the ten lymph nodes encountered. Following operation she was given x-ray therapy in the amount of a total of 2000 roentgens average dose to each of four ports. Following this she did well until September 1956 when she began having pain in the right shoulder and right sacro-iliac region. At that time x-rays failed to disclose evidence of metastasis. However, in February 1957 x-rays of the spine and pelvis revealed widespread involvement of metastatic carcinoma. Immediately thereafter she was subjected to bilateral oophorectomy, and androgen therapy was instituted. Prior to oophorectomy she had been in severe pain, critically ill, and almost bedridden. Following operation, however, there was striking improvement in her general condition, both physically and emotionally. Pain in the lower back and pelvis gradually subsided. Since then she has had occasional twinges of pain in the lower back and at times radiation of pain into the right buttocks. She continues to be active as a housewife and mother and in the summer of 1958 made a trip by automobile to California.

Dr. Chenoweth: Thank you, Dr. Moffett. Before going on to the next case I think we might show the x-rays on this case. I should like for Dr. Thompson to comment first on this film of the pelvis taken in 1957, five months after she began to have pain in the sacro-iliac region.

Dr. Thompson: One sees multiple areas of bone destruction throughout the bones visualized on this film which includes upper femurs, pelvis and lower lumbar spine.

Dr. Chenoweth: Do you think that there is some generalized osteoporosis manifested in this film?

Dr. Thompson: There is definitely, to a moderate degree.

Dr. Chenoweth: All right. Now Dr. Moffett,

if you will show the later film, please. This film, also showing upper femurs, pelvis and lower lumbar spine, represents the condition of the patient taken about a year after she had been on testosterone and had received x-ray therapy. What do you see there, Dr. Thompson?

Dr. Thompson: There has been marked improvement. These bones have returned nearly to normal. There are still visible a few small, destructive lesions, but mineralization is lots better, as is obvious to anybody looking at this film. A very good response.

Dr. Chenoweth: Thank you very much. Suppose, Dr. Moffett, you give us the second case now, please.

Dr. Moffett: The second case is that of Mrs. J. B. N. This young housewife with three children was subjected to radical mastectomy at the age of 39 years (in June 1955). Report of the pathologist disclosed infiltrating ductular carcinoma, grade III, with axillary metastases and suggestion of vein invasion. Following operation she developed phlebitis of the axillary and brachial veins and there was marked edema of the arm. She received no postoperative x-ray therapy. Lymphedema of the right arm persisted in the grade of about 2 plus.

In February 1957 she presented with a nodule in the left breast. Left radical mastectomy was carried out at that time and the pathologist reported: "Infiltrating small cell carcinoma of the breast with metastasis to the proximal nodes with no involvement of the distal nodes." At that time the question of x-ray therapy and of oophorectomy was debated and the decision made to defer these measures to be utilized as palliative procedures if the occasion arose.

In August 1957 the patient presented with metastatic supraclavicular nodes, proven by biopsy. Bilateral oophorectomy was carried out at that time and x-ray therapy was administered. She was also started on androgen therapy by mouth. She remained well and continued her regular activities in spite of chronic lymphedema of the right arm.

In November 1958 she presented herself with advanced pleural effusion and enlarged stony-hard nodes in the right groin. She was then referred to Dr. Hawley who administered Thio-TEPA directly into the pleural cavity and gave the same medication by vein.

Dr. Chenoweth: You see here films of the patient taken at the time she developed pleural effusion. Dr. Hawley, would you care to comment on these films?

Dr. Hawley: What I see is evidence of fluid collecting in the right chest as high as the 4th

interspace, with the heart shadow displaced to the left. This was prior to removal of approximately 2000 cc. of fluid from her chest. At the end of the aspiration, 30 mg. of Thio-TEPA was placed in the chest and 15 mg. given intravenously. This is a film taken approximately 2½ weeks later and shows a marked diminution in the quantity of fluid present. The cardiac shadow is shifted back toward the midline. At this time the patient is feeling much better basically. Many things, such as the brawny edema at the back of the chest, persist. She is fairly comfortable, however, and has resumed the teaching of piano.

Dr. Chenoweth: Dr. Andrews, would you review briefly some of the aspects of the hormonal management of these patients?

Dr. Andrews: Hormonal therapy for advanced carcinoma is only a palliative procedure and certainly surgery and radiation should be exploited to their fullest extent before it is considered. Hormonal therapy for advanced breast cancer can be divided into two general classes: that of medical management, which involves administration of primarily two groups of drugs—androgens and estrogens; and, secondly, surgical treatment which includes oophorectomy, adrenalectomy and hypophysectomy. Through experience it has been found that estrogens are better in patients who are past the menopause, over 60 years of age, and have bony metastasis rather than soft tissue metastasis. In patients who are under 60, and in premenopausal patients with soft tissue metastasis, the androgens are more effective. In 1954 Pearson and his group at Memorial attempted to determine a method by which they could select those patients who would respond favorably to hormone therapy. They found that in one group of patients urinary calcium excretion would rise throughout the early menstrual period and at the time of menses would fall back and again rise throughout subsequent periods. It was found that when these patients had bilateral oophorectomy the urinary calcium excretion fell down to normal limits and they improved both subjectively and objectively. In another group of patients they found that they also had a high urinary calcium excretion but bilateral oophorectomy would not help them, and also throughout their menstrual cycle the calcium level of excretion was more or less constant and did not rise and fall as was true in the cases I just mentioned. Therefore, they determined that there must be at least two types of mammary carcinoma which they designated as estrogen dependent type carcinoma and non-estrogen dependent type carcinoma, and that the estrogen dependent type carcinoma would benefit from the removal of sources of estrogens in the body or bilateral oophorectomy. They also found that

some of the patients with non-estrogen dependent type carcinoma would respond empirically to cortisone therapy, 200 to 300 mg. per day. However, they had a very small series of such cases and only a short follow-up (about two to three months). Of course, bilateral oophorectomy is only palliative and lasts from a period of nine months to a year or longer, varying with different individuals. Then these patients have recurring symptoms and go progressively downhill. So it was felt that there must be a source of estrogen somewhere else in the body and the most logical place would be the adrenals. Therefore, adrenalectomy has been tried also. With adrenalectomy the patient stands a 40 to 50 per cent chance of getting improvement. Again, Pearson and his group attempted to determine which patients would respond to adrenalectomy and which would not. They found that by examining pathologic slides, the more differentiated tumors would respond to bilateral adrenalectomy, whereas the more anaplastic ones would not. Of course, as Dr. Cunningham pointed out, grading tumors presents many difficulties, but these people were able to correlate their clinical improvement with the pathologic report with 75 per cent accuracy, which was not bad. However, adrenalectomy has several disadvantages: one, adrenalectomy will fail if there are any adrenal rests located distant from the adrenal gland itself. In these patients another procedure may be carried out, that is, hypophysectomy. It was first done in 1951, I think, and since then there have been quite a number done. It is thought that the pituitary gland, through its growth hormone, is responsible for neoplastic growth to some extent, and by doing a hypophysectomy one removes that source of hormones. Improvement has been gained in 40 to 50 per cent of these patients also. It is the tentative opinion of Dr. Bronson Ray of New York Hospital that, if the procedure were carried out earlier in carefully selected patients, the rate of improvement would increase. It must be pointed out, however, that there is some hazard associated with the surgical removal of the pituitary gland, and that the incidence of complications is rather high. It must be concluded that the place of hypophysectomy in the management of advanced carcinoma of the breast is at present not established clearly.

Dr. Chenoweth: Thank you, Dr. Andrews. Now Dr. Thompson, will you discuss the x-ray treatment of carcinoma of the breast? You may wish to include your views on the use of irradiation in the primary stage of the disease as well as in the advanced stages.

Dr. Thompson: I presume you meant to word your question to include all forms of irradiation

therapy used in treatment of the breast, including x-ray therapy. Actually, there are three modalities of irradiation therapy, only two of which are extensively used in this country. These two are x-ray and radioactive cobalt teletherapy. Radium implants or plaques or forms of interstitial radium implants are used in Europe rather extensively but not much in this country. Here treatment of these lesions resolves itself into one of the two methods mentioned earlier. Of the two, both are available locally. Of course, we have a cobalt 60 teletherapy unit available and our group feels, at least, that it has some advantages over ordinary x-ray in that there is less skin reaction and less nausea in the average patient. Actually, one can get about as good results with ordinary x-ray management as with cobalt 60, as far as the end result is concerned, but the skin reaction is often times undesirably severe with x-ray therapy, especially in the axilla. We treat as routine two general areas, using two fields to cover the supraclavicular areas and include the axilla, and another field to cover the entire mammary distribution of nodes. We feel that it is important to cover both areas adequately. Now, the theory behind irradiation treatment leaves something to be desired in that we theoretically cannot possibly give a true cancerocidal dose to the areas treated. Of course we do feel sure that some cancer cells in the ordinary course of treatment—which amounts to about 3500 roentgens average tumor dose—are killed but by no means all. There are many changes in the irradiated tissues which help to keep the lesion localized and prevent spread if there is residual tumor, including lymphatic obliteration, fibrosis and other changes that Dr. Cunningham can explain better than I. At any rate, objectively, irradiation gives certain advantages over operation alone in cases beyond at least stage I. I think it is convenient to divide these lesions according to their preoperative status into about four stages, and call stage I a well localized lesion without any invasion of the breast, no skin involvement, and no demonstrable node involvement. In this stage I think that survival does not depend much upon postoperative x-ray therapy. Approximately 85 per cent of them will survive five years after operation alone, and x-ray or other irradiation therapy does not substantially increase that survival rate. As to more advanced stages, stage II is actually the one most usually encountered, and is a situation where there are few nodes involved but no invasion of the breast or involvement of the skin. We can increase the survival in this stage, as compared to operation alone, up to about 15 per cent with postoperative irradiation therapy. As far as postoperatively irradiating stage I is concerned, I think that should be left up to the surgeon more or less and the way

that he feels about it; we are not adverse to treating these if requested by the surgeon since some feel that survival may be increased by a small percentage. As far as the far-advanced lesion is concerned, irradiation has some place in palliation of these lesions by making them a little cleaner, reducing the size of the lesion, and so forth. We can also treat local recurrences with irradiation, of course, and I think it is a good way to handle them. Nodules involving the skin are particularly responsive to irradiation, generally a soft x-ray beam. Metastases to bone and other soft tissues respond nicely. I might also mention that irradiation sterilization sometimes is not as effective in my opinion as surgery, but is used if patients object to surgery, and has a place in advanced lesions with metastases.

Dr. Chenoweth: Would you comment on the utilization of irradiation therapy in bone metastases?

Dr. Thompson: It is rather effective in the usual lesion encountered. One does not give a high dose, and in fact a high dose of irradiation is not necessary to the local lesion in any bone that is irradiated. We usually give about 1000 to 1500 r to the lesion which will usually result in sclerosis and filling in of new bone in about two to three months.

Dr. Chenoweth: One other question, Dr. Thompson, not strictly related to therapy but pertinent to your field: Is it not true that the diagnosis by x-ray of a bone lesion may not be possible for several months after the onset of pain in that particular area suggestive of metastasis?

Dr. Thompson: That is a commonly encountered situation. If the patient has pain, I think that one had better assume that there are metastases in the area; that is, of course, if you can fairly well establish bone pain; for example, girdle pain or something of that sort. At any rate, with suggestive symptoms it is well to continue to check with x-ray for awhile. I think that if there is much pain it is better to go ahead and give some local irradiation therapy rather than wait for radiographic appearance of the metastases. Fully 90 per cent of them will improve remarkably when that is done.

Dr. Chenoweth: Thank you, Dr. Thompson. Dr. Hawley, will you now touch upon the medical management of these patients by whatever means you choose to use, certainly to include the use of the mustards and possibly the radioisotopes?

Dr. Hawley: Because "cancer cure" can be claimed only by surgical extirpation and "beam" radiation, patients chosen for medical therapy have recurrent disease. In this group the estimate of therapeutic values is difficult. Frequently, beam radiation is used concurrently with chemotherapy.

The varied growth rates of solid tumor produce widely varying intervals between onset of treatment and death. Therefore, comparison of several small series of cases evaluating one agent might show disparate results. Relief of bone pain and the complete omission of analgesic drugs, plus recalcification of bone, can be striking indication of temporary improvement and can be demonstrated with chemotherapy and radioisotopes at times. The usual 3- and 5-year survival periods used in the evaluation of surgical and radiation technique are not at all approachable by these methods at present.

In spite of the discouragement of numerous failures, of insufficient and conflicting clinical evidence, there is general agreement that surgical and beam radiation treatment is not a satisfactory final answer to cancer management, and the hope is that biochemical intervention in the metabolism of the cancer spell, thereby causing its death, will come to pass.

Agents which attach an active side chain radical onto protoplasmic bonds with serious disruption of nuclear enzymatic activity have received the label "alkylating" agents. Nitrogen mustard, HN2 methyl bis (beta chloroethyl) amine, is the earliest and best known of this now large group of agents. Mustard is not generally effective in treating solid breast tumor by the intravenous route. The intra-arterial administration upstream from the tumor has been shown by Klopp to be somewhat more effective where this is feasible. An extension of the intra-arterial technique recently described by the surgical group in New Orleans is that of establishing an extra-corporeal circulation of the tumor bearing part, more easily managed in limb tumors, but also accomplished in one patient with a large breast cancer for recycling mustard to the tumor using an ordinary pump technique. This clearly is not for the everyday use in treatment of tumors and is an experimental approach which bears watching. For general use of a chemotherapeutic agent, however, HN2 has been a failure in solid breast tumors.

Similarly, TEM (triethylene mealamine) has been tried without significant success.

Triethylene thiophosphoramidate (Thio TEPA) is one of the more recent of the "alkylating" agents achieving widespread experimental use. Results reported at the New York Academy of Science meeting in 1957 were frequently favorable but some conflict among the observers of breast disease was apparent.

Triethylene mealamine is injected intravenously and with proper tumor position can be injected directly into the tumor mass itself. Gellhorn from Columbia University reported its use in nine patients with complete absence of satisfactory re-

sponse in all. Wright, from the New York University Post-Graduate Medical School, considered that five of seventeen patients responded satisfactorily with regressions in tumor size in one or more areas. The group at the Roswell Park in Buffalo were the most impressed in a study of twenty five patients, all of whom had had surgery and radiation and hormone management previously. Of the twenty five, six died within a month and were considered failures which could not be assessed. Ten survived sufficiently long for the observer to assure the authors that no improvement resulted following the use of the drug. Nine of the twenty five they considered to respond satisfactorily. With a second course of therapy in ten patients, the disease remitted again in six. A third course was carried out in two with one responding for the third time. It should be pointed out that the responses of improvement, depending upon the observer, may represent changes in tumor size and subjective improvement lasting only weeks or a few months. Like mustard before it, Thio-TEPA is a highly toxic drug to bone marrow. Aplastic changes occur with some frequency following its use. Certainly no great hope exists that this particular molecule is a significant advance in the treatment of solid breast tumor but it may point a way to the biochemist.

Breast cancer producing intrapleural and intra-abdominal effusions is a trying group for the therapist, once failure of response to beam radiation occurs. Thio-TEPA is apparently a satisfactory agent for treating this complication. It produces much less nausea than mustard. It has been used successfully intrapleurally in the tumor clinic at the Medical College of Alabama on several occasions with remissions of fluid collection lasting several months. The chest x-rays shown today demonstrate the disappearance of an effusion in one patient receiving 30 mgm. of Thio-TEPA into the right pleural space and 15 mgm. intravenously in November 1958. The chest in January is entirely clear, V. C. has increased from 1200 cc. to 2600 cc. in two months. The brawny edema from blocked lymphatics of the chest wall over an area of palm size has totally disappeared, and the patient is asymptomatic at present. Nitrogen mustard has a similar effect with more disagreeable nausea in approximately 30% of cases.

Colloidal radiogold, Au 198, and colloidal chromic P32 phosphate can be used for similar palliation in the treatment of malignant effusions from breast tumors. The success in the treatment of chest effusions is considerably greater than that of abdominal effusions as a rule. Our experience at the University Hospital has been discouraging with radiogold except in one of about four breast cases. From the point of view of cost and hazard,

both to the patient and to personnel, the use of HN2 or Thio-TEPA would seem preferable.

Radiophosphorus, as sodium acid phosphate (NAH PO₄), was used by Low Beer intravenously immediately following mastectomy for breast cancer in the forty's. Fearing permanent marrow damage he discontinued this practice for an interval of four or five years to assess results. These have not been fully reported but in one general article it was quoted that metastatic disease was extremely low in the treated group for three years postoperatively. I know of no exact analysis of this.

Friedell, in 1950, reported on the prolonged survival of several patients with seemingly hopeless breast cancer following the intravenous administration of P32 given in small doses at frequent intervals, over about two or three weeks. Maxwell collected a long series between 1951 and 1957, when he reported to the Southern Medical Association, claiming, like Friedell, the relief from bone pain in 80% of people with such pain and recalcification of bone lesions in 15 to 20%. Soft tissue metastases apparently are unaffected. Maxwell advised the use of testosterone concurrently believing that P32 collected to a greater degree in the metastatic lesion as a result. In the last three years we have used Maxwell's technique in five patients with metastatic breast cancer, giving 1 mc. at one- or two-day intervals intravenously concurrent with testosterone for a total dose of nine to twelve mc. All patients had severe bone pain and many bone lesions. All had received hormone and x-ray therapy following surgery. Striking remission occurred in two persons. The first patient had had severe bone pain fifteen months with transient remissions with oophorectomy and after androgens, which she refused to continue because of their masculinizing effect. She experienced prostration and cyclic vomiting during the testosterone and P32 administration. Prednisone was used for relief of these effects, and makes thereby questionable the validity of results. There is general agreement that about 8% of metastatic breast disease will remit temporarily on steroid hormones alone. Within three weeks, however, analgesic drugs were stopped completely. The patient, who had been largely an invalid, became ambulant and lived a life much more active than usual until abdominal metastases, followed by recurrent back pain, put her to bed eight months later. Repeat P32 treatment failed to relieve on this occasion and the patient died approximately eight weeks after the last course.

The second patient showing striking relief of pain had developed this in spite of oophorectomy and testosterone. She was given prednisone 20 mgm. a day for a trial period of three weeks before

P32 was administered. During this time there was a gradual increase in her daily needs for codeine and aspirin. Within three weeks of the completion of a series of P32 injections, at which time prednisone was reinstituted, the patient became completely relieved of her bone pain, was able to walk about satisfactorily for about seven months before pain recurred, this time not remitting to repeat phosphorus treatment. The clinical results in the second patient seem certainly to relate to the radiophosphorus treatment. Several other observers have noted temporary remission of bone pain by such use of P32, and I am told that now over 2000 radioisotope users have been cleared for this variety of treatment.

It can be shown with tracer experiments that P32 collects in solid malignant tumors only four to six fold when compared with other tissue concentrations of radiophosphorus. It seems likely that the increased bony concentration of radiophosphorus described by Maxwell is related to the laying down of P32 in new bone salts deposited, possibly influenced by the anabolic increase of the protein base in the bone for the inorganic salts to clothe. The heavy beta emission of P32 might thus be playing on the external margin of a tumor mass within its bony nest resulting in significant death of tumor cells within a 3 mm. radius. Certainly further experience is needed to clarify the possible use of P32 in the treatment of bone metastases of breast cancer.

My comments have indicated reasonable usefulness of chemotherapy in the treatment of malignant effusions of the chest, with less satisfaction in the treatment of malignant effusion of the abdomen, and in the use of radiophosphorus for the palliation of bone pain from metastatic breast cancer.

Dr. Chenoweth: And so it is evident in summary that there are a variety of means at our disposal to ameliorate the symptoms and to prolong the life of patients with metastatic carcinoma of the breast. Each case is to be evaluated and individualized on its own merits.

As a matter of practice I utilize x-ray therapy to chest and axilla at the time of radical mastectomy. I prefer not to do oophorectomy as part of the primary treatment, even in premenopausal women. When there is evidence of distant metastasis, whether to bone or soft tissue, I then elect oophorectomy, and usually then await improvement. If this does not take place, or if later an exacerbation occurs, x-ray therapy and androgen therapy are instituted. If these fail, corticosteroids are tried on an empiric basis. Thus far I have not performed adrenalectomy, though I believe that it does have a place in the management of the late case. Hypophysectomy is yet to be evaluated,

but in the opinion of some it is to be preferred to adrenalectomy.

Penicillin Found Effective Against Syphilitic Psychosis

—More than 80 per cent of persons whose brains are damaged by syphilis can return to work if they receive penicillin in the early stages of the brain damage.

Even the severely affected or institutionalized patient has one chance out of three for improvement and rehabilitation if given penicillin, a new study has shown.

The study, dealing with 1,086 patients suffering from brain damage (paresis), covered more than five years and was conducted in eight major hospitals. The report, written by 13 researchers, appeared in the May Archives of Neurology and Psychiatry, published by the American Medical Association.

Penicillin is the standard treatment for syphilis and if given early will prevent paresis all together, the report said. None of the 1,086 patients had received penicillin for early syphilis.

Paresis strikes most frequently during life's most productive years, after an incubation period that usually ranges from 10 to 24 years, the report said. The symptoms range from tremors to serious psychosis.

Without treatment, the outlook for a person with paresis is "dire"—with death occurring within five years after onset. When penicillin is given in the early stages of paresis, the death rate is cut immensely.

The study showed that only 9 per cent of patients are dead from neurosyphilis 10 years after treatment. However, the death rate for paretics is about four times higher than for persons of comparable age, sex, and race because the paretics usually suffer from such other conditions as alcoholism or heart disease.

The study showed that in most instances only one course of treatment with penicillin is necessary to affect the course of paresis favorably. Retreatment appears to exert little effect.

The study also indicated that the use of fever therapy, in which the patient is made to have a feverish disease such as malaria, is probably unnecessary. Fever therapy was long used alone and then combined with penicillin in the treatment of paresis. However, the use of penicillin alone seems to accomplish the same thing as the combination.

The effect of penicillin on individual symptoms and signs of paresis are, in general, "strikingly beneficent," the report said. Disorientation, depression, convulsions, tremors, incontinence, impaired handwriting and other symptoms were greatly improved by the use of penicillin. However, impairments of speech, insight, calculation, judgment and general information do not entirely disappear, the report said.

Nevertheless, many patients with paresis can be rehabilitated and returned to work. The sooner the diagnosis is made and treatment begun, the better the chances of the person returning to a fairly normal life, the report said.

The senior author of the report was Dr. Richard D. Hahn, of Johns Hopkins Hospital, Baltimore.

Snake Bite Dangers, Treatment Outlined—Victims of poisonous snake bites may increase in number and geographical distribution as camping and outdoor activities increase in popularity, according to two Philadelphia physicians.

Most cases of snake bite occur in the southern and southwestern states where there are more snakes and the conditions favor greater exposure. However, poisonous snakes are found in all states except Maine and Alaska.

Writing in the May 16 Journal of the American Medical Association, Drs. Thomas McCreary and Harold Wurzel told physicians that they must all be prepared to treat poisonous snake bites.

Estimates on the incidence of snake bite in this country range as high as 3,000 a year, but the death rate is low—perhaps 10 or 20 a year.

At least 35 species or subspecies of poisonous snakes are known in the United States. Most of these are pit vipers or Crotalidae, which include the many species of rattlers, the copperhead, and the cottonmouth or water moccasin. The coral snake, found in the southern states, is related to the cobra and is not a pit viper.

The Crotalidae are generally nocturnal in their habits and are dangerous on land or water. They are not aggressive and strike usually only for food or in self-defense.

A number of factors affect the seriousness of a snake bite, the doctors said. Very young and very old persons are more susceptible to serious aftermath. A bite is less dangerous on an extremity than one near a vital organ.

The earlier treatment is started, the more effective it will be, they noted. Since most bites occur far from a doctor's office, the victim himself must apply the first aid. If he remains calm, he should have little trouble, they said.

The first step is usually the application of a tourniquet. The objective is to close off the superficial lymphatics to lessen the spread of the venom.

Incision and suction at the bite site is used by many persons to remove large quantities of venom. If it is used, the incision need be made only to the depth of the subcutaneous tissues. As swelling extends beyond the site, short incisions may be made at the edge of the advancing swelling and suction applied over the incisions.

While many persons have survived without the use of antivenin, it should be given by a physician whenever there is any reason to believe that the bite is serious. The amount given may vary—a small person requires a large dose because the venom, distributed in a small volume, is less dilute.

The authors noted that snake bite is always a medical emergency and every victim should be hospitalized. The effects of snake bite may include blood coagulation difficulties, internal hemorrhage, vomiting, shock, and muscular twitching. Generally the patient is thought to be out of danger if he survives the first 48 hours.

Voluntary health insurance coverage is increasing faster among people 65 and over than among any other age group in the country. Forty-three per cent of the population 65 and older now has such insurance—an increase of almost 40 per cent in the last five years.—Health Information Foundation.

Apathy Listed As Cause of Inadequate Diets—Apathy is one of the major causes of inadequate diets, a New York researcher said recently.

L. A. Maynard, Ph.D., Ithaca, pointed out that while sufficient food supplies are available, surveys continue to show that a substantial number of individuals fail to consume diets which meet the recommended dietary allowances.

“Such surveys,” he reported in the May 23 Journal of the American Medical Association, “indicate a widespread lack of appreciation of the importance of an adequate diet and a lack of knowledge of how to select it.”

In his report, Dr. Maynard said a great variety of food supplies are available and that an adequate diet can be obtained by selecting foods from each of the four basic food groups. These include:

—The milk group which includes cheese and ice cream. He recommends that children have three to four cups of milk daily; teen-agers, four or more cups; adults, two or more, and expectant mothers, four or more cups.

—The meat group including two or more servings of beef, veal, pork, lamb, poultry, fish, or eggs. Dried beans, peas, and nuts may be used as alternates.

—The vegetable-fruit group from which four or more daily servings should be selected. These servings should include a dark green or deep yellow vegetable at least every other day, citrus fruit or other fruits containing vitamin C, and vegetables including potatoes.

—The bread-cereals group from which four or more daily servings are suggested. This group includes whole grain, enriched or restored cereal, and bread.

Dr. Maynard added that a good diet can be rounded out by more of the same foods or others, such as table fats, cereal products, and sugar, to provide the additional calories and nutrients needed.

“The food supply of the United States is so large and provides such rich and varied sources of the nutrients needed that it is readily possible for everyone to have an adequate diet from foods available to him,” he concluded.

About seven out of every ten U. S. families now have some form of protection under voluntary health insurance, Health Information Foundation reports. The proportion of insured families has increased almost 10 per cent in the last five years.

Seventy-five per cent of the population in the Northwest part of the United States carries insurance against hospital costs. Comparable percentages for the other sections are 68 for the West, 67 for the North Central, and 55 per cent for the South.

From 1953 to 1958 the proportion of individuals with insurance protection against hospital costs increased from 57 to 65 per cent of the U. S. population. During the same time the proportion of persons with medical-surgical insurance rose even more, from 48 to 61 per cent of the population.



NURSES FOR ALABAMA PATIENTS

A recent editorial in this Journal called attention to some encouraging figures on the enrollment of individuals studying nursing in the nation as a whole. For the members of the Association, however, the availability of graduate nurses in the state of Alabama is far more important.

No one really knows what the ratio of nurses to population should be. The present national average of 258 nurses per 100,000 population is far from ideal. All regions and states continue to report shortages of professional nurses, and national organizations have stated that a ratio of 350 nurses per 100,000 population should be a minimum goal. Certain states in the west and north Atlantic regions now have a ratio in excess of 400 nurses per 100,000 population and yet continue to report an inadequate supply.

The situation in Alabama is a most dramatic and unfavorable contrast to the national picture. In the southeastern region of the country there are only 180 nurses per 100,000 population, and in Alabama itself only 132 nurses per 100,000. Even more alarming than these figures is the fact that more nurses are leaving the state than are entering it. For the past three years the number of nurses moving from Alabama has exceeded the number graduating from all the schools of nursing within the state. This has been offset somewhat by nurses moving into the state from other areas, but the number of these has been insufficient to increase the ratio of nurses to population. The present ratio of 132 nurses to 100,000 population is exactly the same as it was in 1952.

The increase in hospital beds in Alabama, on the other hand, has been almost phenomenal, with the addition, since 1946, of 2,800 beds in general hospitals; with 600 more presently under construction; and with more than 900 additional beds in mental hospitals and tuberculosis sanatoria. The survey conducted by the U. S. Public Health Service in 1948 predicted this increase in hospital beds in Alabama and projected the number of graduate nurses needed each year to compensate for normal attrition rate and still provide nurses to staff the hospitals, health agencies and physicians' offices.

Editorials

According to this projection, the cumulative deficit between 1948 and 1958 is 9,249 registered nurses.

At the present time the total number of nurses practicing in Alabama full time is 2,445. These are, of course, engaged in the various fields of nursing including hospitals, private duty, anesthesia, industry, public health, education, and office nursing. In addition, there are 477 nurses who are working part time in the same broad variety of services.

Little, if anything, can be accomplished by bewailing this scarcity, but the greatest importance should be attached to encouraging the expansion of good programs of nursing education; encouraging professional nurses to remain within the state, or to move into it; and encouraging good graduate nurses to invest their efforts in those particular fields of nursing in which the shortage is most severe in their community.

THE LUCKLESS LEGION

More than 2,800,000 Americans were drafted into the Luckless Legion of automobile casualties in 1958.

In its annual highway safety booklet entitled "The Luckless Legion," The Travelers Insurance Companies pointed out "This is an army of suffering humanity which grows more rapidly each year. It is made up of the injured and the dead, the heedless and the innocent, the young and the old. Since the automobile first appeared on the American scene, these ranks of the crippled and the dead have included more than 60,000,000 of us."

The Luckless Legion is a silent, haunted army. We erect no monuments to it. No grim reminders mar the sleek beauty of the roads and highways which are its field of battle. A newspaper headline, perhaps, marks the induction of the latest recruit. Then silence. Silent suffering. A lifetime of pain. Or the silent memories of those who mourn when the dead are laid to rest.

There were 36,700 men, women and children numbered among the dead of the Luckless Legion during the past year. For every fatality there were 77 people who suffered painful injuries. Hour by hour and day by day, this total climbed until it

reached the staggering total of 2,825,000.

Injuries during the past year rose 12 per cent—twice the rate of increase for the previous year. In the rising curve of injuries lies the greatest waste of property and human resources in our nation. Behind the lines of our efforts toward national progress, the Luckless Legion stands as a vast fifth column.

Statistics, pledges and slogans do not seem to change us. Something more is needed. During 1959, the Luckless Legion will be meeting in our community . . . on a stretch of highway, in a hospital room, in the morgue.

You alone will know when the meeting time is near—in the temptation to bear down a little harder on the gas, to beat the darkness home, to test your reflexes when they are dulled by sleep or alcohol, to jay-walk on crowded streets, to forget caution when weather and road conditions are bad. During 1959, every time you are behind the wheel of a car, remember that the Luckless Legion is looking for recruits. Don't be one.

NUTRITIONAL BLOCKADE OF CANCER CELLS

A nutritional blockade of the cancer cell may account for the effectiveness of one group of chemicals being used in the war against cancer.

This was the implication of a report given recently by a University of Illinois College of Medicine research team to the Federation of American Societies for Experimental Biology meeting in Atlantic City, N. J.

The researchers are Drs. Harris Busch, Samir M. Amer, and William L. Nyhan, who presented the findings.

They are studying the mechanisms of action of the nitrogen mustards, a group of chemicals that have been effective in controlling some cancers. One of these, the aminouracil mustard, has a marked effect on the intake and use of certain proteins for nourishment by the cancer cell, the group reported.

In experimental animals, aminouracil was effective in shutting off protein nourishment to the nucleus of the cancer cell by as much as 50 per cent, compared to cancer cells not exposed to the chemical.

This would uphold a theory that aminouracil and the other mustards tend to starve cancer cells to death. Additional years of probing may be necessary to determine why these chemicals possess this "inhibiting effect," as it is called. Then, perhaps, scientists will be able to tailor-make such chemicals to do the most efficient cancer-killing job possible.

THE AMERICAN'S VIEW OF HEALTH INSURANCE

How do Americans feel about health insurance? Why do they buy it? What do people like and dislike about it? What suggestions do they have for improvements?

Answers to these and other questions pertinent to the field of financing health care costs have been given in a report on the pattern of health insurance coverage in this country and public attitudes toward such coverage.

The report, entitled "A Profile of the Health Insurance Public," has just been published by the Health Insurance Institute, central source of information for the public on behalf of the nation's insurance companies. The document was based on a nation-wide study conducted for the Institute by National Analysts, Inc., in the latter part of 1957. Interviews were obtained with 2000 representative families across the country, the findings released thus yielding data on some 6600 individuals.

This is the first survey of its kind ever sponsored by the health insurance business.

The survey-takers found a high degree of usage among families covered by health insurance. Nearly two out of every five families with such protection reported they had received benefits under their policies during the 12 months immediately preceding the date they were interviewed.

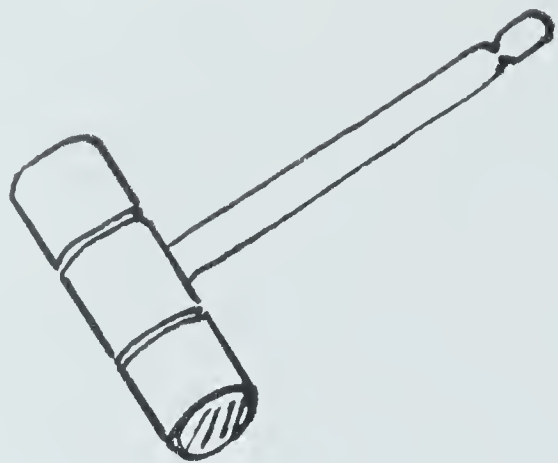
Sixty-nine per cent of insured families said they had at some time submitted one or more claims.

It was officially estimated by the Institute at the beginning of 1959 that more than 121,000,000 Americans were covered by some form of health insurance.

The survey found that all family members were insured in 60 per cent of the families interviewed. In 73 per cent of these families at least one member was covered by health insurance.

Some 81 per cent of the persons interviewed said they were favorable toward the idea of having health insurance for themselves and their families. Many people felt a need for more information on health insurance, and fully half of the insured families who expressed a wish for more information thought they could use additional coverage. The information most frequently desired concerned general facts on the types and extent of coverage.

The need for more information was doubly emphasized in the survey finding that among all families making suggestions about health insurance, the most frequently made suggestion was—"provide more information."



President's Page

JEROME COCHRAN

THE reference I made to Dr. Cochran last month in my statement of intents causes me to want to deal with him further for the benefit of younger members of the Association who may not have had an opportunity to learn of his life and work. For them let him be identified as the father of Alabama's medical and public health organization and its first state health officer.

How often is it true that the man is but the completed canvas of the child; a sharper delineation, an undistorted reflection of the intentness of youth! Said the historian of Dr. Cochran's life: "From his twelfth to his nineteenth year he was engaged alternately at work on the farm following the plough and using the hoe, and at study in the summer, when the press of farm work was over, at the neighboring old field school, where he acquired the rudiments of an English education. Subsequently he supplemented this poor beginning by an extensive course of reading, private study, gleaning everything in his reach in the fields of general literature, general logic, political economy, metaphysics, theology, mathematics and the modern languages. His appetite for knowledge was insatiable and his faculty of acquisition phenomenal. History, philosophy, poetry, fiction, science—nothing came amiss to his hungry intellect, and often after a day's hard work in the field he would hang over his books until midnight."

At age 24 Dr. Cochran became a student of medicine in the Botanic Medical College of Memphis, graduating in 1857, but having convinced himself that the principles of the botanic system were untenable and that there should be no such thing as medical sectarianism, he entered the Medical Department of the University of Nashville to receive, in 1861, a second degree as a doctor of medicine. There followed service in the Army of the Confederacy; and location in Mobile, June 1865, "entirely friendless, totally unknown, infirm in health, and poverty stricken."

Out of poverty, however, may proceed an abundant life, as was true in Dr. Cochran's case. It was in 1870 that he commenced his career in public

health, which he saw with crystal clearness before him, due, in all probability, to his appreciation of the needless ravages of at least two diseases: smallpox and yellow fever. Let another speak of this period in Dr. Cochran's life: "A series of papers by Dr. Cochran, printed in the Mobile Register in 1870, on the origin and prevention of endemic and epidemic diseases of Mobile so attracted popular attention as to lead to the adoption early in 1871, by the City, of an ordinance creating a health officer and placing the sanitary supervision of the City of Mobile in the hands of a Board of Health elected by the Mobile Medical Society. Dr. Cochran was the first incumbent and served during 1871-72. With change of political party, the Board of Health and health officership were abolished, and in lieu was created an advisory board consisting of the then Mayor of the City, the president of the council, and a city physician. This machinery failed to keep yellow fever out of the City in 1873 and in the spring of 1874 allowed smallpox to be introduced, which, by the middle of November, became epidemic throughout the entire City.

"The citizens and the Board of Trade became alarmed and a conference was called, with the result that the original Board of Health was informally revived with full power to act during the emergency. Dr. Cochran was reappointed health officer and before sunset of that day all plans for waging a war of extermination of the dreaded disease were made, and active workers were in the field under the immediate supervision of the indefatigable health officer. The result was a sanitary triumph without parallel in the world's history."

Had these events not transpired it is doubted I would have had occasion to refer to Dr. Cochran and his work in succeeding issues of the Journal. With the indulgence of my readers, I want to deal further next month with him whom I consider to be the South's first gift to medicine and public health.

W. R. Carter



MASA NEW HOME

THE HEADQUARTERS BUILDING

Alabama, along with its sister states of Florida, Tennessee and Mississippi, now has its own home.

After years of renting and borrowing space, The Medical Association of the State of Alabama is now housed in a handsome one-story building at 19 South Jackson Street in Montgomery.

The long-awaited day when the Association would have its own state headquarters building came true on February 26, 1959, when the Association's staff moved into its new 5,000 square foot building. The property on which the building is erected consists of two lots containing 17,000 square feet, and is located in the vicinity of St. Margaret's Hospital and a couple of blocks behind the State Capitol.

In constructing a building of this type there are many problems encountered. These begin with the reason for a new headquarters in the first place, the need for a workable shop, acquisition of land at a reasonable figure, selection of an architect and building contractor, the purchase of furnishings, and the selection of pleasing decorations. These, and other problems, could not have been

effectively solved without a building committee which has worked harmoniously and diligently in following through with minute attention to every detail in making this dream a reality.

Drs. Luther Hill, Chairman, Edgar G. Givhan, W. R. Carter, Douglas L. Cannon and D. G. Gill served on the building committee. Serving in an ex-officio capacity were Drs. J. M. Barnes and Robert Parker and Executive Secretary W. A. Dozier, Jr. This committee, under the inspired leadership of Dr. Hill, is to be commended for the excellent work it has performed during the past two years.

The modern building, designed by Architect J. Streeter Wiatt and built by the C. F. Halstead Construction Company, is of hollow tile and brick construction, and is faced in oriental charcoal gray bricks and trimmed in limestone; which gives the simple, colonial architecture a warm, distinctive appearance.

The front of the building features a portico on which sculpture bronze busts of Dr. Jerome Cochran and Dr. William Henry Sanders will be mounted on pedestals in memorial of these two distinguished Alabama physicians.



Reception Lobby



THE CONFERENCE ROOM

The interior wall finishes are plaster over tile and walnut paneling, and the ceiling consists of acoustical plaster in which daylight type fluorescent lights have been placed. The floors of the building, except in the lobby and conference room, are vinyl tile.

The total area of this air conditioned building is divided into three "use" districts—reception, working and conference.

The modern decor of the reception lobby is greatly enhanced by the beige-colored Italian travertine marble floor and by the dark, rich walnut paneled walls. Using a charcoal and tan color scheme, the lobby is smartly appointed with furnishings by Herman Miller, the famous designer-manufacturer.

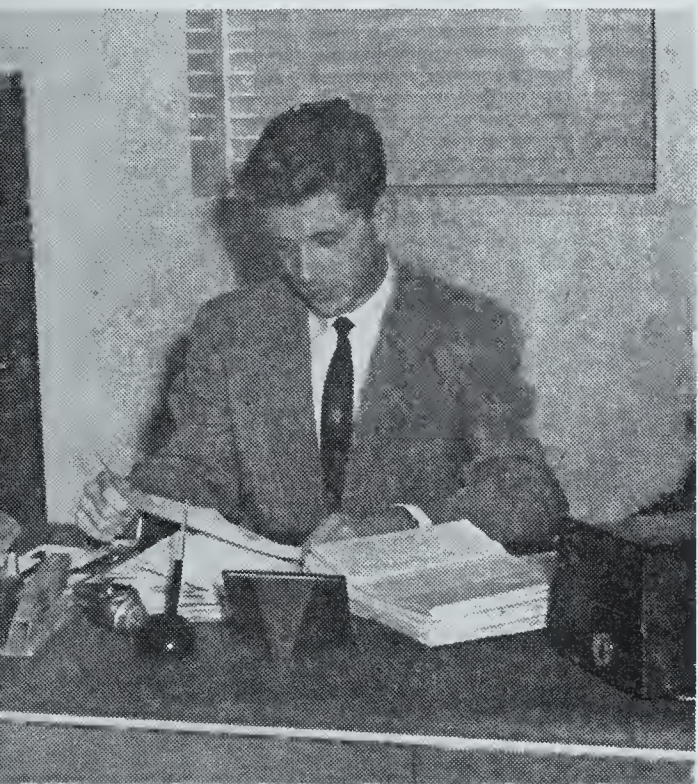
Immediately off the lobby is the "showcase" of the building—the conference room. This room is also paneled with walnut and is carpeted with a thick, beige-colored wall-to-wall carpeting made of acrilan. The room is equipped with a three-way direct and indirect lighting system. The long oval-shaped conference table is 18 feet long and the top is in two tones of wood, and mounted on modernistic black metal legs. The chairs around the conference table are finished in an olive green fabric and were also designed by Herman Miller. The room, which will seat 25 people comfortably, is used frequently by the various committees of the Association. The room has a large cloakroom and a storage closet.

The H-shape building contains six offices, Journal workshop, a clerical-supply room, a machine



Office of Executive Assistant W. V. Ace.

Office Manager Emmett Wyatt



Receptionist-Secretary Mrs. C. E. Sellers

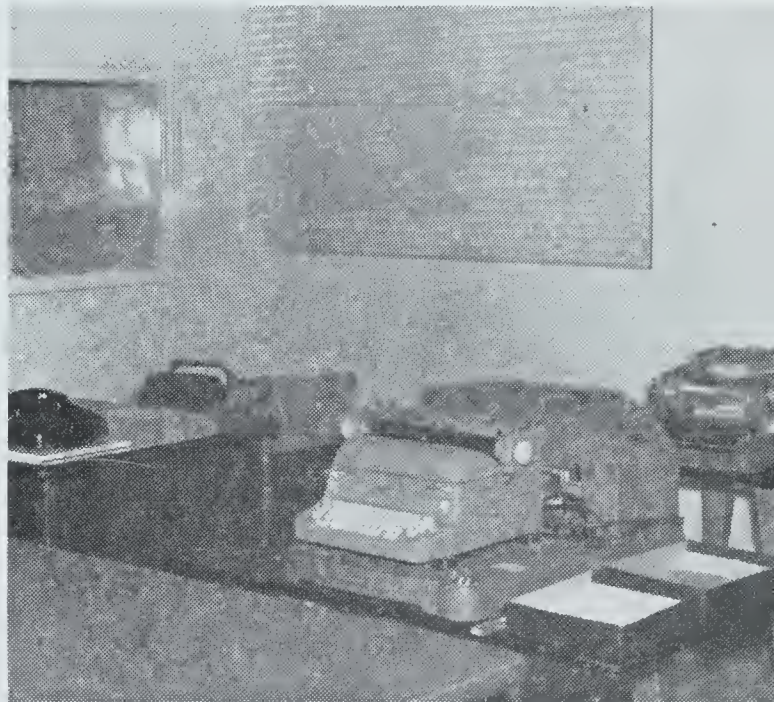


Secretary Mrs. Joyce Fisher

Mail Room, Clerk John Frazier



Machine and Supply Room, below



room, where office and mailing equipment is housed, and a large storage room.

The building was constructed on the property to allow ample off-street parking. The lower level parking area adjoining the building is reserved for guests and will accommodate ten automobiles. The upper level is for the use of the employees of the Association.

This beautiful and most functional building adequately meets the Association's needs at the present, and the architectural design provides for future expansion—simply and economically—by adding a second story, or a side or back wing to the building.

Now that we are “at home” in your new building, we hope that you will “come a’visitin’.”

Doctors Discuss—

LABOR UNIONS HEALTH DEMANDS,
VOLUNTARY HEALTH INSURANCE

The regional meeting of the Committee on Insurance and Prepayment Plans of the Council on Medical Service of the American Medical Association was held on April 25, 26 at Memphis, Tennessee.

The Medical Association of the State of Alabama was represented at this meeting by Dr. E. Bryce Robinson, Jr., A. M. A. delegate and William A. Dozier, Jr., Executive Secretary.

This regional meeting of the Committee on Insurance and Prepayment Plans had requested the following states to send representatives: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, Tennessee and Texas. Each of these states was represented and they had 53 in attendance. The largest delegation was from Mississippi—it had 11. In addition, there were several guests such as: the Executive Vice-President of the Blue Shield Medical Care Plans of the United States; the Assistant Director of Health Insurance of the Life Insurance Association of America; an actuary from the Aetna Life Insurance Company; and the Vice-President of the Medical Service Association of Pennsylvania, which is a Blue Shield organization in that state.

At the outset we would like to say that we believe this was a very worth-while meeting and was most informative to us. Most of the discussion and information presented were on subjects that are of vital concern to organized medicine throughout the United States. Of course, it is realized that specific problems vary largely from one state to another. The problem that is of utmost importance in one state at the present time may not particularly concern another state. However, we must all realize that whatever actions might be taken on a national level or by a national organization will sooner or later affect each of the state or constituent societies of the A. M. A.

A similar regional meeting of this committee was held in Pittsburgh, Pennsylvania, February 28th and March 1, 1959. The same topics on our agenda were discussed at that meeting. In attendance at Pittsburgh were representatives from the following state medical societies: California, Illinois, Indiana, Kentucky, Michigan, New Jersey, New York, Ohio, Pennsylvania and West Virginia. It is our understanding that other regional meetings are to be held.

The discussion at the Memphis meeting concerned two topics: (1) The potential impact of demands of labor unions upon medical society sponsored and approved prepayment programs;

and (2) The provisions of medical care for persons over sixty-five.

1. *Demands of Labor Unions in the Health Field.* As has been rather widely publicized in the lay press and through other public information media, labor unions have expressed much more interest in the health care field for several years and especially during the past year. The current information seems to indicate that most of the national unions have some plan or at least have some investigations under way to enter the health care field more actively, possibly through the use of closed panel plans, union sponsored diagnostic and treatment clinics, and union-owned and operated hospitals. This is all going on at the national level since most of the labor organizations in this country are nation wide in their scope. Most of you are familiar with the changes that have taken place during the past ten years under the United Mine Workers Health and Welfare Plan. Other union leaders are studying this very carefully. Some have made public statements to the effect that it might be possible their union would set up similar organizations. One of the labor unions' major criticisms today is the increased cost of prepayment plans, particularly Blue Shield, and further that they do not cover enough of the health care needs of the members and their families. They are interested in comprehensive coverage. Of course, anyone familiar with this subject knows of the very great cost involved in such programs which might also include home and office care to an unlimited degree. It goes without saying that the more service that physicians and hospitals furnish the more the cost will be. Two-thirds of hospital costs today are for labor. There is an increasing tendency for hospitals throughout the country to be unionized.

The A. M. A. committee and the state representatives at the Memphis Conference were almost unanimous in agreeing that at this time no one had the answer to this big problem. However, it was felt that the major item was the lack of concern or at least the lack of awareness of the seriousness of the situation by individual physicians, particularly those at the grass roots level. As possible suggestions as to how county and state societies might approach this would be medical society actions or contemplated actions in reference to these demands, ways and means of impressing upon all physicians the importance of the events that are occurring, and what steps, if any, can or should be taken by the American Medical Association. It is felt most important that better communication and education should be carried out or slanted toward the individual physician since it was most imperative that he be made aware of and understand the serious implications of the

problem that confronts organized medicine today. A majority of those present expressed the opinion that after the A. M. A. had finished with the regional meetings and covered the entire United States, it will probably be better, from the information which they collected, that some over-all broad program and recommendations be put forth by the American Medical Association through its House of Delegates.

This is a nation-wide problem. Therefore, if it is left to the various states to work out the solution to the problem, then there might be fifty different programs and no uniformity of action or approach to the problem.

2. *Voluntary Health Insurance or Prepayment Coverage for the Aged.* This was the other main item of business discussed at the two-day Memphis regional meeting. At the meeting of the A. M. A. House of Delegates in Minneapolis on December 4, 1958, a resolution was adopted which is as follows: For persons over 65 years of age with reduced income and very modest resources, it is necessary immediately to develop further the voluntary health insurance or prepayment plan in a way that would be acceptable both to recipients and the medical profession. The medical profession must continue to assert its leadership and responsibility for assuring adequate medical care for this group of our citizens. Also the Council on Medical Service recommends to the House of Delegates the following proposal which was adopted: That the American Medical Association, and the constituent and component medical societies, as well as physicians everywhere, expedite the development of an effective voluntary health insurance or prepayment program for the group over 65 with moderate resources or low family income. That physicians agree to accept a level of compensation for medical services rendered to this group which will permit the development of such insurance and prepayment plans at a reduced premium rate.

It was reported at our meeting that a number of states had taken positive steps in this direction and were working out such a program through the media of various state Blue Shield plans. Of course, the main urgency of organized medicine working out something for the population over 65 is the possibility of legislation at the national level—the so-called Forand Bill which would put the government more in the field of medical care and would take over the responsibility for medical and hospital care for all of our citizens over the age of 65, which would be a serious inroad into the free enterprise system of the practice of medicine as we know it and enjoy it today.

It was the consensus of those present that organized medicine must continually reevaluate condi-

tions in the light of modern times. It is unrealistic for organized medicine in 1959 to believe it can carry on after the fashion and methods of 1939.

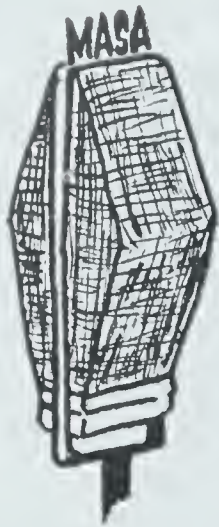
There were several at the meeting who expressed serious concern about the existence of the so-called "welfare state" and its extent at the present time. It is more noticeable in certain states than in others. A representative from Louisiana gave a very interesting report in which it was stated that its welfare program for all segments of the population, particularly those over the age of 65, seemed to be much more extensive than in any other state covered by this regional conference. It was repeatedly emphasized that the medical profession has been unjustifiably accused of contributing more than its share to the high cost of medical care. It is estimated that of total costs for medical care about 60% is for hospitalization. Certainly, all should be aware that that segment of the population over the age of 65 requires considerably more hospitalization than does other age levels of the population. The provision of hospital care is a major problem. Certainly some approach should be made to reimburse hospitals who provide the care for the aged in sufficient amounts to cover the cost. One idea in this field was the provision of more convalescent hospitals which could be operated considerably cheaper than can acute short-term general hospitals. All of us realize that nursing homes need to be greatly expanded. They can play a very important role in the provision of health services to the aged.

We feel sure that after the completion of these regional conferences, which everyone unanimously felt was a step in the right direction in an effort to solve these problems which so vitally affect American medicine, that this A. M. A. committee and the Board of Trustees will have some suggestions to present to the coming meeting of the House of Delegates of the A. M. A. which is to meet in Atlantic City, June 8-12, 1959. We would urge that as many of our state officers, and members of the State Board of Censors as can, make every effort to attend this meeting. Based on information available to us at present, we believe this will be as vitally important a meeting of American medicine that has been held within the last decade. We are at the cross-roads, time is short, and it takes a united effort with the help of all members of organized medicine to preserve the free enterprise system in our American way of medicine.

NEXT ANNUAL SESSION

MOBILE

APRIL 21, 22, 23, 1960



ASSOCIATION FORUM

SPACE MEDICINE

Burton S. Shook, Sr., M. D.
Harry C. McClain, Colonel, M. C.
and
George L. Wyatt, Jr., B. S.
Huntsville, Alabama

Man has decided that the time is close at hand when he will be able to explore space on a personal basis. With man's great curiosity and propensity for breaching barriers into the unknown to gain new knowledge and demonstrate his courage and competence, it is highly doubtful that he will let the first reasonable opportunity pass unheeded. Space exploration will be of such magnitude that no man can foresee its consequences.

Space medicine, at first glance, undoubtedly appears to many people as a capricious or whimsical idea of its proponents. However, upon closer examination, space medicine, with its concomitant medical problems, is already here—an infant, but indubitably *here!*

Aviation medicine, developing over the past 50 years, has become of its own—an accepted subspecialty in the American Board of Preventive Medicine—along with Public Health and Occupational Medicine.

Not more than 20 years ago some stated categorically that man had reached his tolerance limits in safe operation of current aircraft within their environmental and performance envelopes. Bioscientists and engineers combined their efforts to prove the complete fallacy of those predictions, and I am sure they will again disprove the many dire predictions now being voiced on the inhabitability of space for man.

Many societies of various kinds have been formed and are currently extremely active in this field, most certainly at the international level. These societies usually define their area of interest by names such as rocket, space flight, astronautical and interplanetary. These societies have shown great activity and success during recent years, but

they are exclusively technical in nature. The eminent scientist, Dr. Wernher von Braun, recently said:

"I believe that the time has arrived for medical investigation of the problems of manned rocket flight, for it will not be the engineering problems but rather the limits of the human frame that will be the final decision as to whether manned space flight will eventually become a reality."

Sufficient propulsive energies are now available to insert a payload adequate to contain and maintain man into a modest circular orbit for periods of one to four days, depending on the growth factor in the flyable vehicle and the final thrust realization from the booster system. Both the vehicle and booster projects are progressing rapidly to an early completion.

The real problem which remains to be solved is that of establishing a reliability of the total system, consistent with the safety factor for the human occupant. Gentlemen, this is Medicine! Space Medicine! As early as 1948, some open discussions were held in the field of space medicine at the University of Illinois and at the Air Force School of Aviation Medicine. In 1949 a daring step was taken by the commandant of the Air Force School of Aviation Medicine when he created a Department of Space Medicine. In 1950 the Aero Medical Association proposed the formation of a space medicine branch, and in 1951 this branch was finally established. So we too have a society.

The scope of the problems of space medicine is clearly defined, and the space medicine field is not the diffuse area that it was a few short years ago. The introduction of a new concept of the boundaries between the atmosphere and space, based on the functions which the atmosphere has for man and his craft, surely delineates the scope

Presented to the State Board of Censors, Birmingham, April 8, 1959.

of the problems.

Doctors in the biomedical field are faced with a challenge of unprecedented proportion and complexity in placing man into space flight, if his survival and unprejudiced recovery are to be insured. Be assured that this challenge is not taken lightly, for they are well aware of the present inadequacies in affording complete protection from all hazards—either presently known or anticipated. However, no one can reasonably deny that progress has been made and is still being made in this difficult field of assuring effective performance and survival of the human being, operating a complex flight system, under demanding situations, in hostile and potentially fatal environments.

This leads to the sole reason for our appearance before you. We anticipate in the very near future a challenging problem, the likes of which has appeared before physicians with each new major technologic advance. This great problem of concern is: "Who is going to make medical decisions? Who is the doctor?"

The technologists in this space age are soon to reach an impasse or non-medical people are going to make the medical decisions, which usually result in major medical errors and misconceptions. Outstanding technologists are pleading for medical information, and their pleas are justified. If we doctors do not get into this field, generate some interest and produce the urgently needed know-how, other scientists and cultists are going to do it for us. We specifically refer to the biologists, psychologists, human engineers, safety engineers, and many others who might profess to be "human specialists" or pseudo-doctors. The time is *here* and *now* for some action!

Let us then very briefly review some of these medical areas of space medicine within current thinking. We say review because each one of these areas, as well as others we haven't listed for the sake of conserving your time, requires complete research programs with comprehensive results. These are our personal views and we're sure they are conjectural, but time will permit only the mere mention of these.

Physiological Hazards:

1. Oxygen utilization.
2. CO₂ control.
3. Thermal regulation.
4. Ambient pressure.
5. Ambient humidity.
6. Atmospheric concentrations:
 - a. Nitrogen—previously considered inert.
 - b. Metabolism of trace substances—volatile amines, urea.
7. Closed ecologic systems.

Psychological Hazards:

1. The inherent danger of the mission—stress.
2. Isolation.
3. Confinement, with its restriction of physical activity.
4. Reduced sensory inputs.
5. Weightlessness.
6. Disorientation.
7. Sleep—or sleeplessness—cyclic or not.
8. Psychosomatic areas: a) Nausea—vomiting. b) Blood, heart and blood vessels. c) Gastrointestinal—sphincters. d) Chest—aspiration is a real danger since improperly masticated food may float over the palate during weightlessness. e) Elimination of body wastes—solids and liquids.
9. Psychomotor functions—reeducation, such as subjective relaxation, sleep with lack of support, etc.

Orientation of Man in Capsule:

The Man:

1. Must be able to withstand acceleration and deceleration, large "G" forces.
2. Must be able to reach any item that could stray under zero "G."
3. Must be oriented with respect to directions of his flight and the earth.
4. Must be oriented for physiologic and psychologic reasons.
5. Must be oriented with respect to the various kinds of protective equipment.
6. Must be oriented with the closed ecologic environment of the capsule itself.

Instrumentation for Biological Measurements.

1. Totally unknown areas of biology at tremendous expense—we want to get maximum meaningful information.
2. Potentially hazardous area—will require maximum amount of usable information on the occupant's actual or potential condition at all times so that we can terminate the experiment within the time required to assure safe recovery of the human occupants.

Functional Categories.

- a. Information for the record—(direct or telemetered—no need to be read out on real time basis).
 - (1) Cabin humidity.
 - (2) Acceleration.
 - (3) Psychologic—reasoning, etc.
 - (4) Skin temperature.
 - (5) Galvanic skin response.
 - (6) Muscular response (myograms).
 - (7) EKG.

(8) Visual and auditory records.

b. Safety flight information—(real time need—direct or telemetered).

- (1) Cabin pressure.
- (2) Partial pressures of O₂ and CO₂.
- (3) Cabin temperature.
- (4) Oxygen and power reserves.
- (5) Physiologic data: EKG, myograms, heart rate, respiration rate.
- (6) Visual appearance and vocal comments.

Safety of flight information has priority and must get back to ground even if the other does not get through. Once action has been taken to break orbit or reenter, the priority of this instrumentation automatically drops to that of information for the records.

The magnitude of biologic research in space vehicles is so immense that hours and hours could be spent discussing it. When the time comes in our space technology that we can put vehicles into space where and when we want them and either return or visit them at will, we will then have a space laboratory of inestimable value to the fundamental life scientist.

We have attempted to list some of the biomedical factors attendant with manned orbital or space flight. We do not know whether or not a time-table of events has been established, nor could we predict such. We are sure, however, that the near future will bring forth the answers. Man's personal exploration and exploitation are inevitable, and the costs, both in lives and dollars, will be determined by the logic and soundness of his approach to this great challenge.

There is need for medical consideration of this whole problem. Who else but a physician can determine the needs for man in this or any venture, set the standards for the technicians, coordinate the information, and make the medical decisions? Some one group is going to do this—and soon. We trust some infinite, divine, guiding power will see us through this challenging time for the benefit of mankind.

For the sake of justification of a proposal which we shall present shortly, let us give these comments:

1. There is a large area of interest in space medicine by scientists, technicians, and, we feel, from fellow medical doctors in the Alabama area. Many of these people are concentrated in the Huntsville, Montgomery and Mobile areas, with all three branches of the military represented, but we feel that there is more active interest in the non-military doctors than many of our members tend to realize.

2. Let us not keep these physicians in the dubi-

ous position of "acceptance or rejection" as has questionably been done in other medical fields: industrial (occupational) and aviation. These men are our colleagues; let us accept and encourage them to continue medical investigative work.

3. People in all walks of life are not only expecting, but demanding, medical information in this field. Medical aspects must be evaluated, reported, demonstrated, and appropriately considered by physicians. If this is not done, the medical decisions are sure to be made by others interested in the field, such as human engineers, psychologists, biologists, and many others, but medical decisions *will* be made!

Here is our proposal:

1. Give consideration to the appointment of a committee of space medicine within The Medical Association of the State of Alabama.

2. Recommend to the House of Delegates the creation of such a committee during the current session.

3. Recommend that the Association initiate a survey throughout the whole membership to determine the interest in the field and also to military associates at government installations—particularly the Medical College, Birmingham; Redstone Arsenal; Air University, Gunter and Maxwell AFB, Montgomery; Brookley AFB, Mobile, and other south Alabama residents associated with Navy School of Aviation Medicine in and around Pensacola.

4. Recommend and plan for one or more participants on the 1960 State Medical Association program to bring the members up to date on the "state of the art."

The Medical Division at Redstone Arsenal encourages the adoption of the proposal and assures active cooperation and participation.

Are our facilities for medical care adequate? More hospital beds are required to meet our health needs, according to the current issue of *Patterns of Disease*, prepared by Parke, Davis & Company for the medical profession.

Number of hospital beds per 1,000 persons in the U. S. now average 7.8 but this number should be increased to 13.1—an increase of almost 70%—to meet the ratio prescribed in the Public Health Service Act. In nursing homes close to 3 times as many beds as those currently available are required to meet the prescribed ratio.

Of beds needed, *Patterns* reports, about 42% are earmarked for mental hospitals, 37% for general hospitals, 16% for chronic disease hospitals, and the remainder for tuberculosis hospitals.

How many patients does a doctor see each day? The general practitioner carries the heaviest national average daily patient load—18.5—according to *Patterns*. The pediatrician has the next highest—17.1. Average number of daily patient visits for other types of practice includes 13.1 for E.N.T., 12.7 for obstetrics and/or gynecology, and 12.1 for internal medicine.



MEDICAL CENTER NEWS

NEW SURGICAL INSTRUMENT DEVELOPED BY LOCAL DOCTOR

A scrap metal umbilical cord "gun" developed by Dr. L. Clark Gravlee, resident physician in the obstetrics and gynecology service at University Hospital, is being acclaimed by doctors throughout the country for its usefulness in controlling two troublesome medical problems of newborn infants.

With a single movement of the trigger finger, the "gun" fires a rubber band that clamps off the umbilical cord so effectively that bleeding from the umbilical stump is stopped immediately and completely. And, because no human hands need touch the cord, bacterial infection is virtually eliminated.

The instrument, officially named the "Gravlee gun," was tested on 2663 babies. Test reports showed that only one instance of bleeding occurred and that case was attributed to improper use of the new surgical instrument.

The tests also showed that not a single case of bacterial contamination resulted when the "gun" was used.

In a test group of infants whose cords had been tied off with sterile cotton tape, the usual procedure, 100 per cent were found to have positive bacteria culture transferred to the tape from the operator's hands.

Dr. Gravlee, who demonstrated his "gun" at a recent meeting of the American College of Obstetrics and Gynecology in Atlantic City, N. J., was awarded first prize in the resident division for his outstanding contribution to medicine.

The instrument will be made commercially available by Sklar Instrument Co. of Long Island, New York.

It was displayed to the public at the Jefferson County Health Fair last month.

Dr. Gravlee developed his "gun" with the aid of other physicians on the Medical Center staff and with the help of two of the hospital's maintenance staff.

The "gun" has two barrels, a movable one that retracts into the other. The inner barrel has a hook extending from the end and a tight rubber band fitted around the tip just above the hook.

When the trigger is tripped, the hook extends and grasps the cord. As the inner barrel then retracts into the outer one, the rubber band is expelled and clamps over the cord.

The entire operation takes only 20 seconds, according to Dr. Gravlee.

"BOSS OF THE YEAR" TITLE GOES TO MD

Dr. Tom Douglas Spies, Birmingham, was named 1959 International "Boss of the Year" by the National Secretaries Association.

A 1957 recipient of an AMA Distinguished Service Award, Dr. Spies is presently scientific director of the Nutrition Clinic, Hillman Hospital, Birmingham, and chairman of the Department of Nutrition and Metabolism, Northwestern University Medical School, Chicago.

DR. SUSSEX TAKES CHAIR IN PSYCHIATRY DEPARTMENT

Dr. James N. Sussex, formerly associate professor of psychiatry at the University of Alabama Medical Center, has been named professor and chairman of the Department of Psychiatry.

Dr. Sussex, whose appointment became effective May 1, replaces Dr. E. L. Caveny, who has resigned as chairman of the department to enter private practice. Dr. Caveny will remain as a professor of psychiatry on a part-time basis.

Born in Minnesota, Dr. Sussex received his M. D. degree from the University of Kansas School of Medicine. He joined the staff of the Medical Center in Birmingham in 1955.

Prior to that time, he was assistant in clinical psychiatry at Georgetown University School of Medicine in Washington. He also served on active duty with the Medical Corps of the United States Navy as a Commander.

A diplomate in psychiatry of the American Board of Psychiatry and Neurology, Dr. Sussex is a member of the American Psychiatric Association, Medical Association of the State of Alabama, Alabama Academy of Neurology and Psychiatry, and Association of American Medical Colleges. He

is also consultant on psychiatry to the Veterans Administration Hospital at Fort McClellan, Alabama.

GRANT AWARDED DR. QUIGLEY

Dr. Mervyn B. Quigley, instructor in anatomy at the Medical Center, has been awarded a senior research fellowship by the U. S. Public Health Service, through the Division of General Medical Sciences, National Institutes of Health.

The announcement was made recently by Dr. James O. Foley, professor and chairman of the Department of Anatomy, under whose sponsorship Dr. Quigley's nomination for the grant was made.

The purpose of these fellowships is to foster additional research in the preclinical science departments of schools of medicine, dentistry, and public health, through the support of investigators in the preclinical sciences, in the period between the completion of their post-doctoral research training and their eligibility for permanent higher academic appointments.

Selection is based on demonstrated promise for a career in independent research and teaching, and great stress is laid on the candidate's potential for development as an academic leader.

GRANTS, LOANS OFFERED
BY MEDICAL SOCIETY

The Medical Society of Jefferson County is now accepting applications for the following grants and loans for the 1959-60 academic year at the University of Alabama Medical College:

1. *Tuition Grants*—A \$400.00 tuition grant is available to outstanding residents of Jefferson County who intend to practice in this county. Application should be made in writing, along with a summary of scholastic record and a letter of endorsement from a Medical College faculty member, addressed to: Board of Censors, Jefferson County Medical Society, P. O. Box 2591, Birmingham, Alabama, not later than June 15.

2. *Scholarship Loans*—The Society has available for outstanding medical students, who are residents of the county, scholarship loan funds with long-term, extremely favorable repayment provisions. Further details may be obtained by writing to the Society Office, Room 610, Public Health Building, 1912 Eighth Avenue South, Birmingham, Alabama.

CANCER GRANTS AWARDED

Dr. Charles E. Butterworth of the Medical College faculty has received a cancer research grant from the National Institutes of Health.

The grant, which became effective this month, of \$13,886 is for a one-year study of white blood cells in normal and leukemic persons, and the grant carries the option of a two-year extension at \$9,142 a year.

This is an initial grant for Dr. Butterworth, who completed his internship and residency at the Medical College and returned last October after five years in the Army.

Specifically, he will study chemicals similar to a vitamin (folic acid) found in the white blood cells of leukemia victims.

He hopes to find an abnormality in the way leukemic cells metabolize these vitamin chemicals, as compared to the way normal white blood cells metabolize them.

Isolation of such "villain vitamins" and a study of how they work may lead to the discovery of a drug to upset this process, and eventually a cure for leukemia.

DR. PIGMAN SLATED FOR CHEMICAL AWARD

Dr. Ward Pigman, professor of biochemistry, will receive the 1959 Hudson Award of the American Chemical Society.

The award, honoring Dr. Pigman for his many contributions to chemistry, especially in the field of carbohydrates, will be presented at the Chemical Society's September meeting in Atlantic City.

Dr. Pigman is known to a generation of chemists for his compilation, with the late Dr. Max Goepp, Jr., of the Atlas Powder Company, of the standard reference work "The Chemistry of the Carbohydrates."

The award is named for the late Dr. Claude S. Hudson, the great American carbohydrate chemist of the National Institutes of Health.

MEDICAL STUDENT HONORED

Patrick B. Jones of Dothan, senior medical student, has been awarded a Sheard-Sanford prize of \$100.00 for a manuscript entitled "Detection and Properties of Acidic Polysaccharides (Mucins) in Stomachs Resected for Peptic Ulcer."

The announcement was made by Dr. J. F. A. McManus, professor and chairman of the Department of Pathology.

The \$100.00 Sheard-Sanford prize is awarded annually by the American Society of Clinical Pathologists to senior medical students who have conducted, within a department of pathology, research in experimental or clinical pathology. The work must have been performed during the student's undergraduate years. The purpose of the award is to stimulate student research in pathology departments.

DR. CONWELL MADE CHAIRMAN

Dr. H. Earle Conwell has been made chairman of the Musculoskeletal Committee of *Standard Nomenclature of Diseases and Operations*, published by the American Medical Association. He is affiliated with the University of Alabama Medical Center as associate professor of orthopaedic surgery.

Dr. Conwell has done some outstanding and al-

most pioneer work relative to the nomenclature of fractures, mainly along the line of discontinuing the use of the terms *compound* and *simple* fractures and substituting the terms *open* and *closed* fractures.

The next edition of *Standard Nomenclature of Diseases and Operations* will appear in 1960 and the revision will be done by Dr. Conwell, as chairman of the Musculoskeletal Committee.



BOOK REVIEWS

Fat Consumption and Coronary Disease: The Evolutionary Answer to This Problem. By T. L. Cleave, M. R. C. P. (Lond.), Surgeon Captain, Royal Navy. With a foreword by Dr. Percy Stocks, C. M. G. Paper. Price, \$2.50. Pp. 40. Philosophical Library, Inc., 15 E. 40th Street, New York 16, 1959.

This is an intriguing monograph with a unique approach to the problem of fat ingestion and coronary artery disease. This author begins by accepting the premise that there is a direct relationship between increased fat consumption and the increased incidence of coronary artery disease in our present civilized world. His second approach is that the Darwinian theory of the natural law of adaptation is also pertinent here. If this theory is accepted, an organism should be able to rely with absolute confidence on its instinct of appetite to tell whether it should eat or not eat; but only as long as the instinct is being exercised on natural substances. The author then develops this theme to point out that, in our sophisticated world with its pre-prepared foods and unnatural way of eating, our natural instincts exercised on the unnatural foods lead us to an unnatural fat consumption. He then goes on to enumerate the modifying factors and their influence upon this basic law. In the final chapter he points out that, if the pre-prepared and unnatural foodstuffs were avoided and natural instincts followed, this would prevent the unnatural fat consumption and therefore prevent coronary artery disease. In this final chapter he points out specific habits which should be developed to make the natural law of adaptation more valid. This little book should be enjoyed by all interested in the stated problem.

E. Fred Campbell, M. D.

The Plasma Proteins. Clinical Significance. By Paul G. Weil, B. A., M. D. C. M., M. Sc., Ph. D., Director, Transfusion Service and Assistant Physician, Royal Victoria Hospital; Lecturer in Medicine, McGill University; Consultant in Medicine, Queen Mary Veterans and Grace Dart Hospitals; Consultant in Transfusion, Queen Elizabeth and Royal Edward Laurentian Hospitals. Cloth. Price, \$3.50. Pp. 133. J. B. Lippincott Company, East Washington Square, Philadelphia 5, 1959.

This book is a comprehensive discussion of the plasma proteins from a clinical standpoint. It reviews the recent as well as older literature and covers the subject in its entirety.

The origin, properties and function of the plasma proteins are reviewed. Their alterations in disease are discussed. The routine hospital laboratory methods and the more refined procedures of investigative medicine used for their determination are described.

Consideration is given to the classic plasma protein fractions—albumen, fibrinogen, gamma globulin and antihemophilic globulin—as well as the plasma proteins of more recent discovery.

This comprehensive monograph would be a valuable addition to any wide-awake clinician's library.

Luther Hill, M. D.

Maternity, A Guide to Motherhood. By Frederick W. Goodrich, Jr., M. D. Illustrated by Victor Mays. Cloth. Price, \$1.75. Pp. 130. Prentice-Hall, Inc., 70 Fifth Avenue, New York 11, 1959.

This handbook is written as a supplement to the prenatal treatment and guidance that pregnant women receive from their own physicians. In his previous writings, especially in his book "Natural Childbirth," Dr. Goodrich has emphasized the importance to the patient of a complete understanding of the changes within her during pregnancy, childbirth, and the puerperium. Naturally, this book is written in laymen's language and in a very informal tone. It should be easy for the average woman to read and understand.

The first chapter explains to the reader that there are many variations from the "average" that are perfectly normal. Then it emphasizes the importance of avoiding hearsay advice about pregnancy, including old wives' tales.

There is considerable discussion on prenatal care as to diet, exercise, hygiene, and psychology. The chapter on the minor problems of pregnancy is adequate, as is the chapter on the development of the baby. The physiology of labor is described in a matter-of-fact way that should be reassuring. The reader is told how to recognize the onset of labor, when to call the doctor, and what to expect on admission to the hospital. The chap-

ter on advice to husbands is appropriate. There is an appendix consisting mostly of caloric charts.

It is apparent that this book reflects the experience of observing the sources of anxiety, confusion, fear, and misunderstandings about pregnancy. It is written in a warm, friendly, reassuring tone that should be well received and very helpful to any pregnant woman.

Every doctor seeks and needs a book to recommend to his patients to add to the prenatal counsel that he can give them. This little handbook is a good one and will be of marked benefit to any person who is going to have a baby. Any pregnant woman will be a better patient from having read this book and she will be grateful to her doctor for having recommended it to her.

Joe W. Perry, M. D.

Schizophrenia. By Manfred Sakel, M. D. With a foreword by Prof. Hans Hoff, Head of the Department of Neurology and Psychiatry, University of Vienna. Cloth. Price, \$5.00. Pp. 335. Philosophical Library, Inc., 15 East 40th Street, New York 16, 1958.

This is a posthumously published work of the renowned Austrian-born psychiatrist, Dr. Sakel, who died in New York in 1957. The book consists of two main sections, the first of which contains a discussion of the etiology, symptomatology, and psychopathology of schizophrenia. The second part is devoted to the insulin coma treatment of the disease, a method which was discovered and developed by the book's author. It would not appear worth while merely to add another treatise to the many published on this subject. However, aside from its significance for the history of psychiatry, this work is remarkable and deserves attention because it presents the author's views on psychiatric illness in general, which constitute what is essentially a pathophysiologic approach to mental disease. In an introductory essay on "Man and His Mind," Dr. Sakel draws a sharp dividing line between psychiatrically ill patients and those others whom he considers to be "people who were overwhelmed by the problems of life." The latter are "superficially emotionally disturbed people who at most needed moral support and perhaps only flattery and self-justification." Turning to the fascinating, as yet unsolved, question of the pathogenesis of schizophrenia, Dr. Sakel postulates that stimuli release impulses in the nerve cell which are transmitted along intercellular pathways until they reach the normal end point of perception. If this route is "derailed," due to an assumed structural (though not microscopically visible) damage in the nerve cell, phenomena such as delusions, hallucinations, and other psychotic manifestations will appear. Schizophrenia, then, is thought to be the result of such a cataclysmic interference in the structure of the nerve cell.

The second major contribution of this book, and one which is very noteworthy, is the detailed exposition of the insulin shock treatment of schizophrenia. In his introduction Dr. Hans Hoff rightly stresses the fact that Dr. Sakel's discovery of this treatment furnished the impetus for the introduction of other physical methods of treatment and largely contributed to a new concept of the mental patient as being potentially curable. The author discusses the rationale and the steps which led to the introduction of insulin coma and gives a thorough description of the method which he used originally, and which has remained essentially unchanged. He emphasizes that success or failure of insulin treatment depends on its individual adaptation and minute regulation in every case.

Lest it appear that Dr. Sakel attached no importance

to psychologic aspects of therapy, one may quote the following sentence from this section: "The physiological correction of the underlying physiological functions has therefore to go hand in hand with a correct psychotherapeutic attitude on the part of the physician, no matter what the cause of the malfunction in the brain may be."

Regardless of the physician's orientation and his agreement or disagreement with the author's theoretical formulations, he will find this a stimulating book, important both for clinical psychiatry and the history of medicine.

Henry Spira, M. D.

Childbearing Before and After Age 35. Biologic and Social Implications. By Adrien Bleyer, M. D., Associate Professor Emeritus of Clinical Pediatrics, Washington University School of Medicine, St. Louis. Cloth. Price, \$2.95. Pp. 119. Vantage Press, Inc., 120 West 31st Street, New York, 1958.

Dr. Bleyer is associate professor emeritus of clinical pediatrics at Washington University School of Medicine and, in reading this book, it is apparent that the book is written from the heart as well as from his extensive clinical knowledge and experience. This book is written for the laymen to emphasize the hazards of late childbearing and "the biological advantages of early maternity." The author states that the book is planned for college students and leaders of society but it can be understood and appreciated by any intelligent adult.

In this book are summarized many different statistical studies that have been published showing the correlation between maternal age and imperfect babies. The statistics are adequate and the conclusions and deductions from them are sound. He shows that the frequency of fetal complications, such as achondroplasia, congenital heart disease, mongolism, neonatal deaths, and miscarriage, progressively increases with the mother's age. For some reason, there is an abrupt increase in the frequency of these complications at age 35. He presents the various theories about the increased frequency but none is conclusive. In a separate section the percentage increase in frequency of maternal complications is emphasized.

Most of the facts in this little book are not new to physicians but it is impressive to see them all grouped together in the way that Dr. Bleyer presents them. He emphasizes the obvious conclusion that the younger years are the desirable ones for reproduction. He does not avoid the fact that the first years of young married people are economically fragile and he suggests that it is the parents' responsibility to aid them at that time without indulging them. He could have used the age of childbearing figures about endometriosis to further strengthen his plea.

It takes skill in writing to avoid frightening those who absolutely cannot marry young and reproduce young but the author does it well and reassures them that they still have good chances of healthy babies. There is much valuable material in this book. If it were read by the younger people for whom it is intended it would surely encourage them to utilize the proper years for childbearing. This book can be recommended by the physician to any group or individual who is seeking guidance on this vital subject.

Joe W. Perry, M. D.

Textbook of Surgery. Edited by H. Fred Moseley, M. A., D. M., M. CL. (Oxon), F. A. C. S., F. R. C. S. (Eng.), F. R. C. S. (C), Assistant Professor of Surgery, McGill

University; Associate Surgeon, Royal Victoria Hospital, Montreal. Ed. 3. Cloth. Price, \$17.00. Pp. 1336, with 738 text illustrations and 108 color plates. The C. V. Mosby Company, St. Louis, 1959.

This is a delightfully written textbook by the staff of McGill University that remarkably, for this day and age, attempts to cover all fields of surgery except for the eye and ear. The covering of such a large territory naturally makes for assets and for shortcomings.

The assets are that the book is written in the delightful prose of the author's British heritage. In addition, the profuse illustrations, which include 108 beautiful color plates by Dr. Netter of the Ciba collection, lend great clarity. Each subject is covered anatomically, physiologically, and clinically, which, with the profuse illustrations, makes the book an entity in itself. These factors, plus a fine introduction covering the history and philosophy of surgery, make it the most readable and lucid textbook of surgery this reviewer has come across and one that any man on his clinical clerkship or during his internship could use frequently and profitably as a reference work for each new case or operation. Again, in the British tradition, relative emphasis is placed on the names of instruments, methods of suturing, tying knots, et cetera. Though these facts can eventually be picked up by experience, the chapters covering them would certainly hasten one's orientation in the surgical world. A bibliography at the end of each chapter lists the more pertinent articles contributing to that subject.

On the debit side, occasional rather didactic statements that do not warrant such assumptiveness are the necessary concomitant of covering such a large field in 1336 pages. Also, as must so often occur in any hard-cover publication during these rapidly changing times, some paragraphs are already outdated. For instance, the protein electrophoretic pattern is not mentioned, the old albumin-globulin "ratio" being described. Homografts are mentioned as the principal means of arterial replacement, and only briefly is it stated that "plastic cloths . . . are also used and appear to be just as effective."

In summary, the readable prose, profuse illustrations, and encyclopedic coverage would make this book a frequently used one, if it were by the bed of any surgical student or interne. The mature internist or general practitioner would also find it a valuable reference work. It should not, however, be accepted as a bible, but, for that matter, there is no textbook that should be.

T. Brannon Hubbard, Jr. M. D.

Neurological Basis of Behavior. Ciba Foundation Symposium. Edited by G. E. W. Wolstenholme, O. B. E., M. A., M. B., B. Ch., and Cecilia M. O'Connor, B. Sc. Cloth. Price, \$9.00. Pp. 400, illustrated. Little, Brown & Co., Boston, 1958.

Alabama psychiatrists will be gratified to find the names of two scientists who recently spoke before the Alabama Academy of Neurology and Psychiatry among the participants of this symposium. Those of us who were fortunate enough to hear Dr. H. W. Magoun of the University of California will be glad to see him discuss again his interesting studies on the early development of concepts linking various mental faculties with regions of the central nervous system. From Plato's "tripartite soul," with its localization of rational faculties to the head, passion to the breast, and appetite to the belly, to, later, more sophisticated attempts to relate brain structure and function, Doctor Magoun outlines these views held in antiquity and during the Mid-

dle Ages, with reproductions of a number of illustrations. Sir John Eccles, who visited the Medical College of Alabama only a short time ago, contributes a paper discussing the behavior of the nerve cell as a functional unit of the central nervous system as it is viewed in modern neurophysiologic research.

This book contains the papers and discussions presented at a symposium on the interrelations of neural and behavioral mechanisms. This symposium was also to commemorate the birth of Sherrington 100 years ago. Among the articles there are several which will be of great interest to the clinician as well as to the neurophysiologist. One is Wilder Penfield's report on the results of stimulation and epileptic discharge in the temporal cortex, leading to the conclusion that the role of the temporal cortex is interpretation of present experience by reference to past experience. He bases his work upon a series of over 700 operations carried out for the cure of focal epilepsy. C. P. Richter adduces evidence from animal experiments that severe stress may produce changes in the nervous system, possibly lesions in the hypothalamus. The effects of some drugs on behavior, and electroencephalographic observations on schizophrenics, are taken up by S. L. Sherwood.

No review could do justice, of course, to the wealth of neurophysiologic research presented at this symposium, linking this field to phenomena of behavior and psychology. The greatest significance of this work is perhaps expressed by the chairman of the symposium in the hope that accumulation of data in this field "will one day form the basis of an understanding of normal and abnormal behavior and afford a sound footing for the treatment of psychoses."

Henry Spira, M. D.

Senator Green Gives Longevity Rules—The way a man uses his years—not the way he counts them—tells how old he is, according to 91-year-old Senator Theodore F. Green of Rhode Island.

In an interview reported in the May Today's Health, published by the American Medical Association, Senator Green explained how he has managed to remain active and "young at 91."

The senator, the oldest man ever to serve in Congress, said his secret of longevity is mainly due to moderation and exercise.

"Too many people give up and quit just as they are entering their prime," he said. "I never rest but I do relax. I don't get worried. I don't get excited. I laugh a lot.

"A good way to keep fit is to remain active. I try to do a variety of things—that's what keeps you interested."

His advice for people wanting to live a long life is "Keep a clear conscience, practice moderation, enjoy your life and work, keep your weight down, and take regular exercise."

By exercise he means some daily exercise, not "lounging through the winter and then going athletic on a summer vacation or during a violent week end." Senator Green walks nearly everywhere he goes.

Commenting on other persons who fail to follow the common sense rules of healthful living, Senator Green said, "If they're not careful, they won't live to be venerable!"

INDEX

THE JOURNAL OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Volume 28

July 1958-June 1959

EXPLANATORY NOTES

Arrangement of Index

The index is arranged under the following headings:

- I. Authors
- II. Subjects
- III. Editorials
- IV. President's Page and Organization Section
- V. The Association Forum
- VI. Medical Center News
- VII. State Department of Health
- VIII. Book Abstracts and Reviews

I. AUTHORS

A.

Anderson, R. C.—What should we ask of psychiatry, 1

B.

Behrend, Moses—Various aspects of thoracic surgery, 311
Blank, William Harvey—Extensive pulmonary *Candida albicans* with recovery, 117

C.

Carmichael, Emmett B.—Early Alabama physicians, 81
Chenoweth, Arthur I., et al.—Symposium on breast cancer, 378

D.

Davis, David A.—The effects of general anesthesia on the circulation, 137
Davis, James A.—Nitrogen by inunction in treatment of angina pectoris, 371
Deibert, Kirk R., and Gary, Loren—A fifty-six year progress report of a case of gastrostomy, 8
Donald, Dan C.—The surgical management of the post-phlebitic leg ulcer, 44

E.

Eichold, Samuel, and Wright, R. Denny—*Nocardia asteroides* effectively treated with concurrent steroid management of pemphigus vulgaris, 333

G.

Gamble, Edward W.—Psychiatric referrals, 33
Goshen, Charles E.—Some common denominators in the medical management of patients, 273

H.

Haik, George M.—Advances in cataract surgery, 365
Harrison, Donald C.—Dissecting aneurism of the aorta, 176
Hendrick, James W.—Diagnosis and treatment of intraoral cancer, Part I-144, Part II-172
Hicks, James J., Bushnell, James J., and Hicks, Julius N.—Present concepts in the management of posterior nasal epistaxis, 246
Hill, Luther L.—Extracellular fluid, 168
Hogan, Robert S.—Musculoskeletal manifestations of visceral disease, 207
Holley, Howard L., Stigler, Stephen L., McMahon, John M., and Hogan, Robert S.—Present status of drug therapy in rheumatoid arthritis, 233, 282
Hubbard, Brannon T., Jr.—Post-emetic rupture of the esophagus, 239

J.

Jones, Walter B.—The lawyer and doctor in court, 139

K.

Kirschenfeld, J. J., and Tew, H. H.—Some practical aspects in the management of the anemias, 36

L.

Lafferty, Charles R., and Robertson, Lester M.—Museum mountings and colored prints used in teaching neuropathology, 79

Livermore, Lt. Col. David I.—The role of the doctor in atomic warfare, 201

London, Irving D.—Trimeprazine, an oral antipruritic, 342

Long, Lawrence W.—Peptic ulcers are bad, 314

M.

McIntire, Ross T.—A progress report on research in the preservation of blood and blood derivatives, 305

Meeker, W. R., et al.—Clinical usefulness of retrograde brachial aortography, 338

Michaelson, Julius—Evaluation of the Papanicolaou smear technique to determine early cancer of the uterus, 165

N.

Newton, Michael—Diagnosis of the adnexal mass, 334

Nicely, Park, and Welling, Arthur W.—Injuries to the urinary tract, 269

Noojin, Ray O., Stough, Dowling B., and Osment, L. H. S.—Clinical studies on a new cod liver oil preparation, 115

P.

Petcher, Paul—An unusual abdominal tumor, 309

R.

Reaves, J. Ullman—Surgery of the prostate, emphasizing one-step suprapubic prostatectomy, 109

Risman, George C.—The use of steroid and adrenocorticotrophic hormones in the treatment of mumps orchitis, 77

S.

Schwartz, F. F.—Physical medicine and rehabilitation in chronic illness, 10

Smith, Frederick W.—Surgical significance of spastic colon, 373

U.

Ulloa, Alexander; Griffin, Stanley W.; Hayes, Merlyn Lynn, and Holley, Howard L.—The use of latex agglutination reaction in the diagnosis of rheumatoid arthritis, 212

W.

Warr, Lloyd C., and Shipman, W. Mark—Respiratory insufficiency and peptic ulceration, 85

Williams, Thomas H., Jr.—Vesicorectostomy: A means of urinary diversion, 281

Wilson, Harwell—Stricture of the common bile duct: etiology, prevention and surgical treatment, 5

Windham, S. W.—Rupture of the small bowel secondary to lymphosarcoma, 204

—Spontaneous rupture of the small bowel, 243

Word, Buford—A ritual for diagnostic uterine curettage, 112

Z.

Zukoski, C. F. and Dillard, R. A.—Choledochoduodenal fistula, 53

II. SUBJECTS

A.

Innexal mass, diagnosis of (Newton) 334
Alabama physicians, early (Carmichael) 81
Abdominal tumor, an unusual (Petcher) 309
Anesthesia general, effects on circulation (Davis) 137
Aneurism of the aorta, dissecting, a review (Harrison) 176
Angina pectoris, nitroglycerin by inunction in (Davis) 371

B.

Bile duct, stricture of the common, etiology, prevention and surgical treatment (Wilson) 5

C.

Cancer, breast, a symposium (Chenoweth, et al.) 378
Cancer, intraoral, diagnosis and treatment (Hendrick) Part I-144. Part II-172
Cancer of the uterus, evaluation of the Papanicolaou smear technique to determine early (Michaelson) 165
Cardida albicans, extensive pulmonary with recovery (Blank) 117
Cataract surgery, improvements in (Haik) 365
Clinical usefulness of retrograde aortography (Meeker et al.) 338
Choledochoduodenal fistula (Zukoski-Dillard) 53
Chronic illness, physical medicine and rehabilitation in (Schwartz) 10
Cod liver oil, clinical studies on a new preparation (Noojin) 115

D.

Deterioration in atomic warfare, the role of (Livermore) 201

E.

Esophagus, post-emetic rupture of (Hubbard) 239
Extracellular fluid (Hill) 168

G.

Gastrostomy, a fifty-six year progress report of a case of (Deibert-Gary) 8

L.

Lawyer and doctor in court, the (Jones) 139
Lymphosarcoma, secondary, rupture of the small bowel (Windham) 204

M.

Management of anemias, some practical aspects in (Kirschenfeld and Tew) 36
Medical management of patients, some common denominators in (Goshen) 273
Mumps orchitis, the use of steroid and adrenocorticotrophic hormones in the treatment of (Risman) 77

N.

Neuropathology, museum mountings and color prints used in teaching of (Lafferty-Robertson) 79
Nocardia asteroides effectively treated with concurrent steroid management of pemphigus vulgaris (Eichold-Wright) 333

P.

Peptic ulcers are bad (Long) 314
Posterior nasal epistaxis, present concepts in the management of (Hicks, Bushnell and Hicks) 246
Postphlebotic leg ulcer, the surgical management of (Donald) 44
Preservation of blood and blood derivatives, a progress report on (McIntire) 305
Prostate, surgery of the, emphasizing one-step suprapubic prostatectomy (Reaves) 109
Psychiatric referrals (Gamble) 33
Psychiatry, what should we ask of (Anderson) 1

R.

Respiratory insufficiency and peptic ulceration (Warr and Shipman) 85
Rheumatoid arthritis, present status of drug therapy in (Holley, Stigler, McMahon and Hogan) Part I-233, Part II-282
Rheumatoid arthritis, the use of latex agglutination, reaction in the diagnosis (Ulloa, Griffin, Hayes and Holley) 212

S.

Small bowel, spontaneous rupture of (Windham) 243
Spastic colon, surgical significance (Smith) 373

T.

Thoracic surgery, various aspects of (Behrend) 311
Trimeprazine, an oral antipruritic (London) 342

U.

Urinary tract, injuries to (Nicely and Welling) 269
Uterine curettage, a ritual for diagnostic (Word) 112

V.

Vesicorectostomy: A means of urinary diversion (Williams) 281
Visceral disease, musculoskeletal manifestations of (Hogan) 207

III. EDITORIALS

Adrenalin, effects of cardiac stimulant, 14
Allergy, Southeastern Association, 153
A. M. E. F., 346
American Association of Medical Assistants, 61
American College of Chest Physicians, Silver Anniversary, 319
American College of Gastroenterology, 91
American College of Surgeons, sectional meeting, 186
Amines as brain hormones, functions of, 216
Asthma, prednisone in, 124
Arthritis Foundation comments on polio announcement, 90
Atlanta Graduate Medical Assembly, 1959, 218
Blood clot dissolving enzyme, 59 and 121
Cancer prospects, 318
Cancer, recognition of accessible, 88
Cancer Seminar, Southeastern States, 89 and 121
Clinical Hypnosis, Birmingham Society, 153
Community's hospital bill, 151
Cutter case, 287
Dental care, financing, 152
Directory of blood facilities, first, 251
Dystrophics, full life for, 153
Family doctor, the, 60
Gelatin capsules, important tools, 123
Health care bill, 58
Health insurance, benefit payments, 217
Health insurance for senior citizens, 287
Health insurance, three-eighths of aged have, 288
Health insurance, utilization of, 16
Hormone injections solving obstetric problem, 252
Hospital admissions in 1957, 120
Hospital employment of the disabled, 217
Hospitals, infection in, 14
Hypercholesterolemia, dietary management of, 317
Increased basic knowledge needed, 316
International College of Surgeons, 186
Iron deficiency anemia, 58
It is not you alone, 184
Marriage is a good investment, 316
Mechanical brain use growing in medical sciences, 252
Medical expense insurance, major, 120
National Foundation, new goals for, 89

New Orleans Postgraduate Assembly, 186
 Nurses for Alabama patients, 386
 Nursing recruits reach new high, 286
 Obstetrics and Gynecology, American Board of, 61 and 153
 Overweight, executives are getting thinner, 15
 Physician's ethics, 150
 Research dog hero of 1958, 250
 Steroid therapy, new, 124
 Texas study finds orinase effective, 319
 Thigpen, Charles Alston, 88
 U. S. drug research sets world health standards, 286

IV. PRESIDENT'S PAGE AND ORGANIZATION SECTION

Aging, Committee on, 94
 Athletic Injuries Conference, dates set, 294
 Blue Cross-Blue Shield, Committee on, 93
 Building, progress report, 149
 Committee appointments, 126
 Community rating survey, 63
 Doctors discuss health demands, 392
 Doctor needs of the state, Committee on Public Relations, 93
 Essay contest, 294
 Headquarters building, 389
 Health fair, 321
 Highlights of annual session, 352
 Interprofessional relations, 292
 Medical assistants courses, 293
 Medical reporter award, 294
 Medical scholarships, special study group on, 221
 Mental Health, National Institute of, 189
 National Foundation scholarships, 222
 New model AMA, the, 190
 Physician placement, 293
 President of the Association, 350
 President of the Auxiliary, 351
 President's page, 17, 62, 92, 125, 154, 187, 219, 253, 289, 320, 349, 388
 Program of annual session, 255
 Program of the Association, 18
 Program of the Auxiliary, 258
 Public safety program, 220
 Special meeting, 321
 Rural Health Council, 126 and 295
 Speakers bureau, 321
 State fair, exhibit, 188

V. ASSOCIATION FORUM

Alcoholics, outpatient clinic, 68
 Alcoholics, treatment of, 261
 American Cancer Society, Alabama's program, 323
 American Heart Association, ten years research, 99
 Drought in the grass roots, 194
 Family physicians, a view of our, 155
 Mental hygiene, State Health Department's program, 324
 Practicing physician, profile of the, 223
 Red Cross blood program, 291
 Space medicine, 394
 World Health Organization, 128

VI. MEDICAL CENTER NEWS

Medical Center News, 26, 70, 96, 132, 159, 192, 226, 263, 296, 326, 357, 397

VII. STATE DEPARTMENT OF HEALTH

C.

Cancer patients, care of indigent, 74

D.

Dental public health, Alabama's program, 135

H.

Health program, State Department's, 30
 Heart disease control, 320
 Hospital service for the indigent, 359

L.

Laboratory: specimens examined, 31, 76, 104, 136, 163, 199, 230, 267, 300, 331, 360

M.

Mental health program, 299

N.

Nursing home care, improving, in Alabama, 102

P.

Poison control centers, 265
 Preventable diseases: 32, 76, 104, 136, 163, 199, 230, 267, 300, 331, 360
 Public health laboratories, the, 162

S.

Sanitation programs, 229

V.

Vital statistics: 32, 104, 164, 199, 230, 266, 300, 331, 360

W.

Water resources, protecting Alabama's, 198

VIII. BOOK REVIEWS

Cerebrospinal fluid—production, circulation and absorption: Wolstenholme, 231
 Childbearing before and after age 35: Bleyer, 400
 Diabetes as a way of life: Danowski, 105
 Doctor business: Carter, 301
 Endocrine tumors, hormone production in: Wolstenholme, ed., 200
 Fat consumption and coronary disease: Cleave, 399
 Forensic medicine: Simpson, 231
 General surgical management, principles of: Dudley, 20
 Healthful school living: Wilson, 107
 Heart disease, dietary prevention & treatment of: Gofman, 105
 Heart-power, you can increase your: Steincrohn, 105
 Hormones in blood: Wolstenholme, ed., 106
 Love, skill and mystery: Bovet, 107
 Maternity, a guide to motherhood: Goodrich, 399
 Medical treatment, handbook of: Clatton, 200
 Mucopolysaccharides, chemistry & biology of: Wolstenholme, ed., 231
 Neurological basis of behavior: Wolstenholme, ed., 401
 Peptic ulcer, the story of: Tonkin, 106
 Physician's handbook: Krupp, 231
 Physiological chemistry, review of: Harper, 200
 Plasma, proteins: Weil, 399
 Schizophrenia: Sakel, 400
 Soldier in white, the life of General George Mill Sternberg: Gibson, 105
 Strabismus ophthalmic, symposium II: Allen, ed., 107
 Surgery in World War II, ophthalmology & otolaryngology: Coates, 106
 Textbook of surgery: Moseley, ed., 400
 Water & electrolyte metabolism in relation to age sex: Wolstenholme, ed., 301
 What do we know about heart attacks? Gofman, 301
 Urology in general practice: Hamm, 301

